

# 2012

ANNUAL REPORT





# Annexes

3 FINANCIAL STATEMENT

5 KEY PERFORMANCE INDICATORS

11 OTHER INDICATORS

24 VLIZ ORGANISATION

29 NATIONAL AND INTERNATIONAL NETWORKS

31 SUPPORT TO INTERNATIONAL ORGANISATIONS

45 EXTERNAL FINANCING PROJECTS

51 SCIENTIFIC EQUIPMENT AND INFRASTRUCTURE

53 EVENTS 2012

56 PUBLICATIONS 2012

# Balance Sheet and Income Statement

December 2012

## BALANCE ON 31 DECEMBER 2012 (kEUR)

<b>Assets</b>	<b>31-12-2011</b>	<b>31-12-2012</b>
Intangible assets	10.13	23.84
Tangible fixed assets	1096.55	4044.73
Financial assets	4	5.51
Amounts receivable within one year	331.79	1299.36
Cash investments	2725.07	1953.54
Liquid assets	548.29	329.44
Deferred charges and accrued income	29.48	27.74
<b>Total</b>	<b>4,745.31</b>	<b>7,684.16</b>
<b>Liabilities</b>		
Allocated funds	250	375
Profit and losses brought forward	2052.83	2535.34
Capital grants	512.19	3170.4
Provisions for liabilities and charges	0	0
Amounts payable after one year	1579.16	1055.52
Amounts payable within one year	351.13	548.9
Deferred charges and accrued income	0	0
<b>Total</b>	<b>4,745.31</b>	<b>7,685.16</b>

The figures of the balance sheet and income statement include all subsidies received by VLIZ as stated in the management agreement or the covenant.

No surplus of the allocated subsidy was brought forward as a reserve in 2012 (art. 11 § 3 of the covenant).

Budgetary deviations from the 2012 budget (art. 11 § 3 of the covenant): none.

## INCOME STATEMENT ON 31 DECEMBER 2012 (kEUR)

Income	31-12-2011	31-12-2012
Operating income	4628.18	6246.07
Financial income	59.11	404.96
Exceptional income	26.84	17.13
<b>Total</b>	<b>4,714.13</b>	<b>6,668.16</b>
<b>Expenses</b>		
Remuneration and social security	2676.96	3469.18
Services and other goods	1494.85	1414.4
Provisions for liabilities and charges	0	0
Depreciation	232.19	393.14
Financial expenses	4.37	5.32
Other operating expenses	272.38	778.37
Exceptional expenses	0	0.25
<b>Total</b>	<b>4,680.75</b>	<b>6,060.66</b>
<b>Income</b>		
<b>Result for the financial year</b>	<b>33.38</b>	<b>607.50</b>
<b>Transfer to allocated funds</b>	<b>250.00</b>	<b>375.00</b>
<b>Profit brought forward as of 31/12</b>	<b>2,052.83</b>	<b>2,535.34</b>

# Key Performance Indicators (KPIs)

## KPI 1

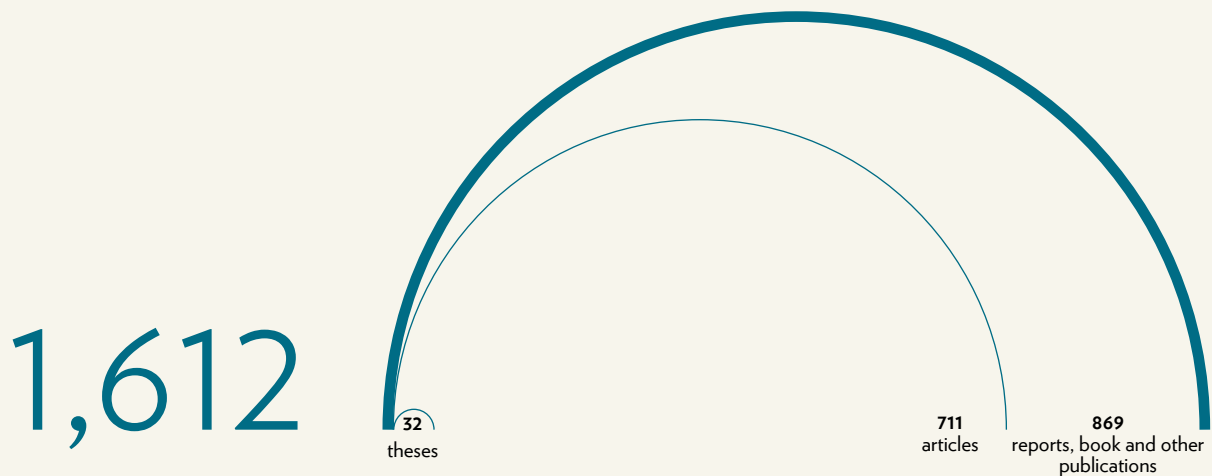
Annual increase in data volume of the Open Marine Archive for Flanders (articles, reports and theses) of 1,000 units per year.

The most important part of the Marine Library's collection is the Open Marine Archive (OMA), where the work of Belgian marine scientists is made freely available. This way we optimally promote the visibility, distribution and use of these research results as well as scientific communication. OMA contains peer-reviewed articles, articles from local magazines, press cuttings, scientific posters, reports, conference reports, theses, pictures, videos etc.

Internet users from all over the world can freely consult and download all these publications through the VLIZ website ([www.vliz.be/EN/Marine\\_Library](http://www.vliz.be/EN/Marine_Library)). OMA records are ranked high in search results thanks to the open archive harvester Google Scholar. This way Belgian marine research gets maximum visibility on the Internet.

A total of 1,612 new references were added to the Open Marine Archive in 2012. These references include 711 articles, 32 theses and 869 reports, books and other publications.

### NEW REFERENCES ADDED TO THE OPEN MARINE ARCHIVE



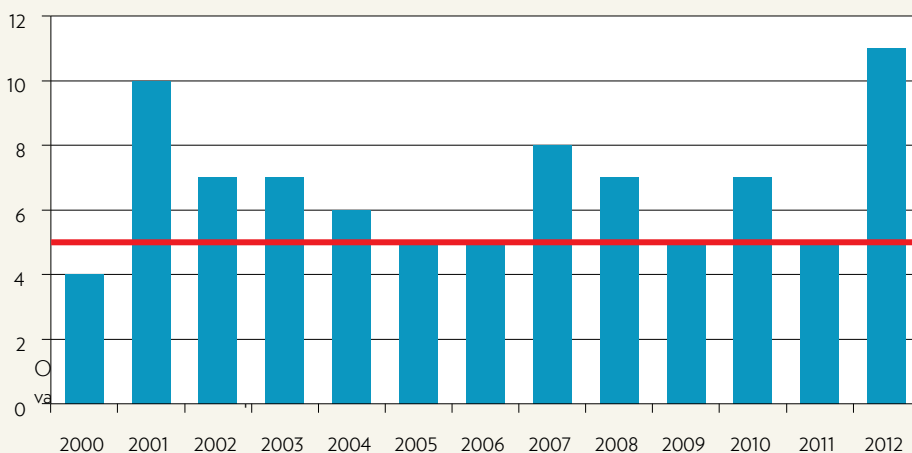
## KPI 2

Yearly publication of at least five issues of the electronic newsletter 'VLIZINE' and three issues of 'De Grote Rede'.

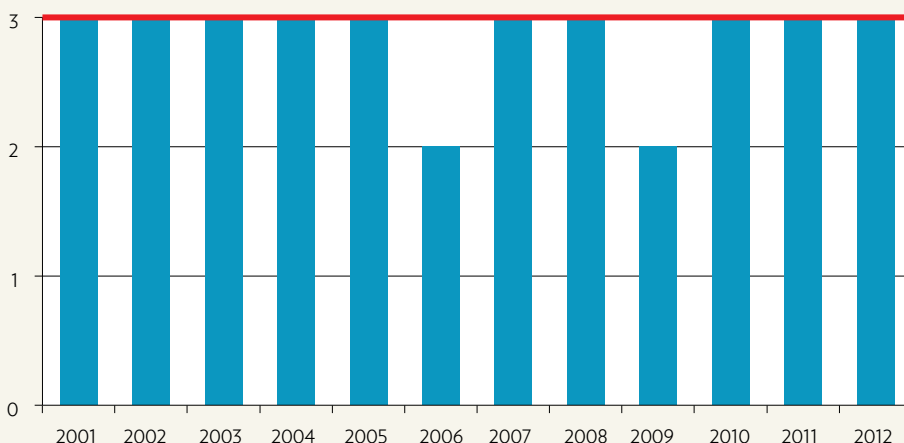
One of the responsibilities of the Flanders Marine Institute is to popularise and distribute marine scientific information towards various target groups. Within this scope we annually organise various seminars, workshops, symposia and information sessions and have developed an Infodesk where everyone can ask marine and coast-related questions. The Communication & Information division of VLIZ also issues two regular publications ('De Grote Rede' and the digital newsletter 'VLIZINE') and contributes to other publications, a large number of which are also intended for the public at large.

Eleven issues of VLIZINE and three issues of De Grote Rede appeared in 2012. Through these publications we reached 1,053 and 6,016 subscribers respectively.

### NUMBER OF ISSUES OF VLIZINE



### NUMBER OF ISSUES OF DE GROTE REDE



## KPI 3

At least 150 sailing days spent on scientific research and associated monitoring on a yearly basis.

VLIZ provides researchers with logistical support by ensuring the management, maintenance and operation of research infrastructure and equipment.

VLIZ has three vessels at its disposal for scientific research: RV Simon Stevin, RIB Zeekat and ROV Genesis. If need be, vessels from the Flemish fleet other than RV Simon Stevin can be deployed for marine scientific research as well. In 2012 this was primarily the case for research and monitoring activities of the University of Antwerp, the Flemish Environment Agency (VMM) and the Research Institute for Nature and Forest (INBO).

In 2012 the new Flemish research vessel Simon Stevin was brought into use in replacement of the previous research vessel Zeeleeuw, which served until 15 June 2012.

The Remotely Operated Vehicle (ROV) Genesis and accompanying equipment was donated by Ghent University to VLIZ on 1 April 2012. ROV Genesis is an unmanned underwater vehicle primarily used on international research vessels. In the long run, the ROV will be made operational so that it can operate from RV Simon Stevin as well.

Finally, VLIZ also has the Rigid Inflatable Boat (RIB) Zeekat, which can be used from the research vessel Simon Stevin or from the shore. RIB Zeekat can be deployed in the Scheldt Estuary as well. The reinforced keel is designed to run the vessel aground on tidal banks.

VLIZ coordinated a total of 310 effectively realised days at sea in the calendar year 2012, including 157 with RV Zeeleeuw and RV Simon Stevin, 37 with RIB Zeekat, 6 with ROV Genesis and 110 with other vessels from VLOOT (Shipowner of the Authorities) dab and the Maritime Access division. RV Zeeleeuw and RV Simon Stevin were deployed for 1,343 hours in 2012 for sampling in the Belgian coastal waters and the Scheldt Estuary, or 91% of the time at sea made available by VLOOT (Shipowner of the Authorities) dab.

### NUMBER OF DAYS AT SEA REALISED

Vessels	2004	2005	2006	2007	2008	2009	2010	2011	2012
R/V Simon Stevin (Zeeleeuw)	155	151	122	150	162	166	151*	152*	157
RIB Zeekat	37	45	35	51	39	32	57	40	37
ROV Genesis									6
'Third' vessels	3	44	41	38	37	36	84	73	110
<b>Total</b>	<b>195</b>	<b>240</b>	<b>188</b>	<b>239</b>	<b>238</b>	<b>234</b>	<b>292*</b>	<b>265*</b>	<b>310</b>

\* Continuous trips over consecutive days – including sampling at night – are counted as one unit in this table (2010: 7 continuous trips, 2011: 6 continuous trips).

## KPI 4

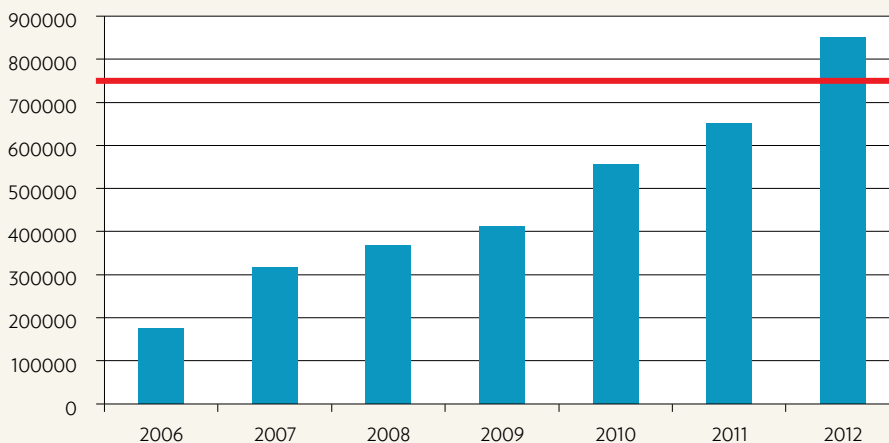
At least 750,000 unique visitors to the informative websites managed by VLIZ on a yearly basis.

One of the principal aims of VLIZ is to make the versatile and high-quality marine and coastal research in Flanders and the wider region more widely known. For this purpose we invest a great deal in making research results and derivative data products available on the Internet.

A total of 851,142 unique visitors consulted VLIZ's informative websites in 2012. The most consulted pages were those of IMIS, the Sluice Dock, Wetenschatten, the sea fisheries photo gallery and MIDAS.

To make marine scientific research in Belgium more widely known, VLIZ began to revamp its entire website [www.vliz.be](http://www.vliz.be) in the autumn of 2012. It will be online by September 2013. Both the layout and the structure of the current website will be overhauled.

### UNIQUE VISITORS TO THE VLIZ WEBSITES



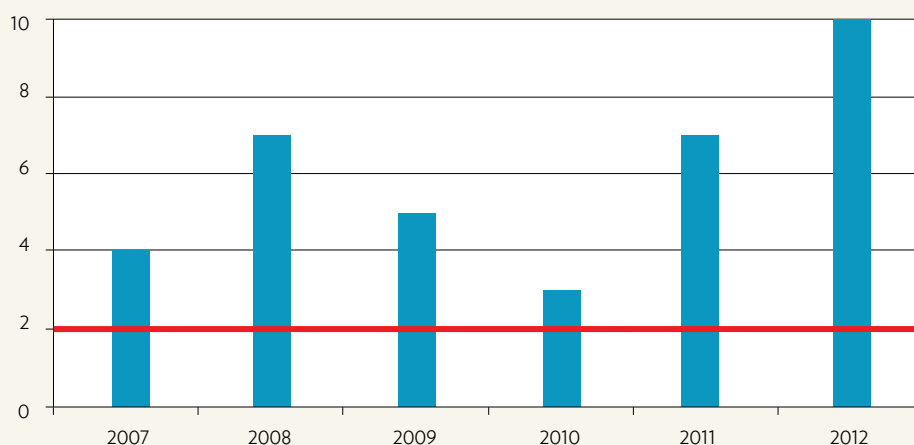
## KPI 5

At least two initiatives (seminars, conferences, workshops, etc.) a year for teachers.

Since 2007, VLIZ has placed special focus on schools and other educational institutes by means of a Structural Partnership with the Flemish Government. Most of the educational products are offered through the VLIZ website: educational packages, PowerPoint presentations, practicals, posters, photo and video galleries, the 'Our Coast' questions & answers database and the 'Seastats' section, to mention only a few examples.

We (co)organised ten initiatives for teachers and other educators in 2012. These included:

### INITIATIVES FOR TEACHERS AND OTHER EDUCATORS



### INITIATIVES FOR TEACHERS AND OTHER EDUCATORS IN 2012

		PARTICIPANTS		
07.05.2012	Syntra training course "Regiogids Kust" - "Vlaamse (zand)banken: een uniek onderwaterlandschap" (Flemish [sand]banks: a unique underwater landscape)	InnovOcean site, Ostend	15	Syntra West with the cooperation of VLIZ
23.06.2012	National Marine Educators Association Conference - workshop for teachers	Anchorage, Alaska	30	NMEA with the cooperation of VLIZ
20.07.2012	EuroMarine Summer School - workshop for teachers	Porto, Portugal	25	EuroMarine with the cooperation of VLIZ
17.08.2012	Educational boat trip for Syntra training course "Regiogids Kust"	RV Simon Stevin	15	VLIZ with the cooperation of Syntra West
25.09.2012	Guide training course "Zee op de korrel" - "Zeespiegelstijging ruimer gekaderd" (Sea level rise within a wider context)	InnovOcean site, Ostend	25	Nature and Environmental Education service of the province of West Flanders in cooperation with VLIZ
12.10.2012	First European Ocean Literacy Conference	Provinciaal Hof, Bruges	107	VLIZ in cooperation with EMB, EMSEA, MBA, UoGöteborg, NMEA, CoE
22.10.2012	Syntra training course "Regiogids Kust" - "De zee: kenmerken, gebruik en misbruik" (The sea: characteristics, use and misuse)	InnovOcean site, Ostend	15	Syntra West with the cooperation of VLIZ
17.11.2012	Congress of the Science Teachers Association (VeLeWe) - workshop for teachers	UHasselt	45 / 500	VeLeWe and VOB with the cooperation of VLIZ
03.12.2012	Syntra training course "Regiogids Kust" - "Visserij en visconsumptie" (Fisheries and fish consumption)	InnovOcean site, Ostend	15	Syntra West with the cooperation of VLIZ
15.12.2012	Coastal guide seminar	Provinciaal Hof, Bruges	140	Nature and Environmental Education service of the province of West Flanders in cooperation with VLIZ

## KPI 6

To develop and make available at least two educational teaching packages on the sea and coast a year.

We developed two educational teaching packages on the sea and coast in 2012, namely:

- Planeet Zee learning module 'Exploration of ocean landscapes' for the subject of geography in the 3rd cycle of secondary education (online in 2013)
- Planeet Zee learning module 'The marine food chain' for the subject of biology in the 2nd and 3rd cycle of secondary education (online in 2013)

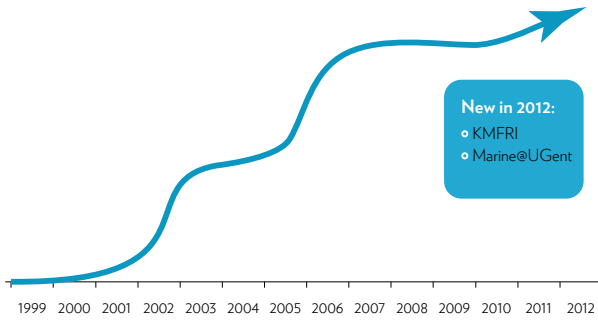
In addition, the previously developed teaching package 'Microplastics, forever and ever' was supplemented with a video manual accompanying the test.

All previously developed products can be downloaded from [www.vliz.be/EN/Infodesk/Infodesk\\_Education](http://www.vliz.be/EN/Infodesk/Infodesk_Education).

# Other Indicators

## Coordination Division

### AGREEMENTS WITH MARINE RESEARCH GROUPS



A list of all agreements VLIZ made previously with marine research groups can be found in the annex to this annual report. No agreements have been renewed so far.

## 2012 ENVIRONMENTAL INDICATORS

### PAPER CONSUMPTION

0.91

Number of packs of paper per staff member

### TONER CONSUMPTION

0.72

Number of toners for printers and photocopiers used per staff member

### GAS, WATER & ELECTRICITY CONSUMPTION



38,838m<sup>3</sup>

177,137kWh

278m<sup>3</sup>

### COMMUTING

€49,158

Train, tram and bicycle allowances refunded to employees

### NUMBER OF KILOMETRES OF VLIZ CARS AT THE END OF 2012 – BENCHMARK

FIAT DOBLO

56,212 km

NISSAN NAVARA

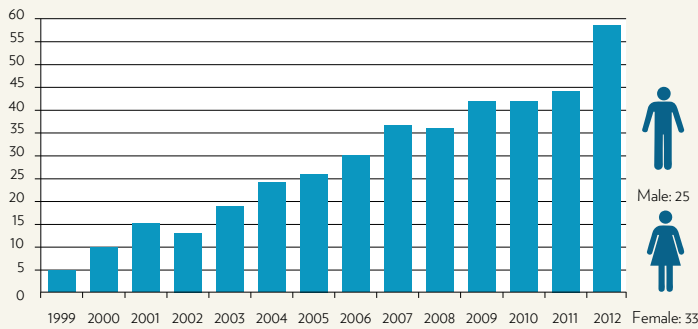
62,313 km

FIAT SCUDO

24,713 km

## 2012 SOCIAL INDICATORS

### NUMBER OF STAFF



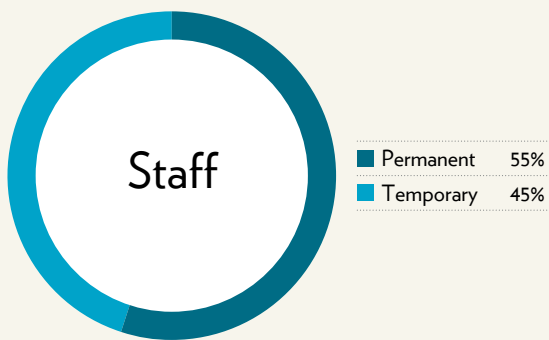
### FOREIGN ORIGIN

**3** Number of people of foreign origin\*  
 \* Source: Wikipedia (Flemish perspective): any person living in the Flemish or Brussels Region, of whom at least one grandparent was born outside the European Union – excluding other Western and Northern European states, the US and Canada.

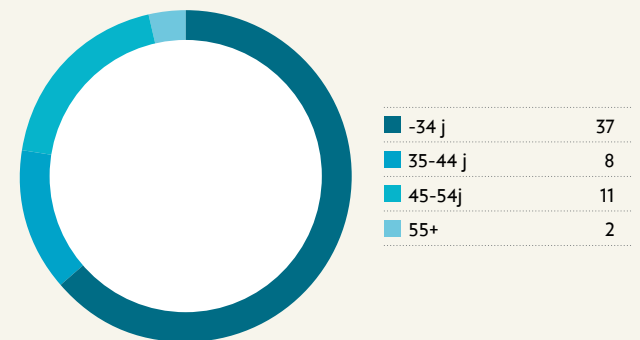
### EMPLOYMENT DISABILITY

**1** Number of people with an employment disability

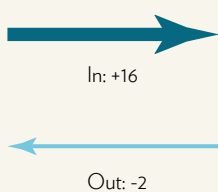
### PERMANENT & TEMPORARY STAFF



### AGE OF EMPLOYEES



### STAFF TURNOVER



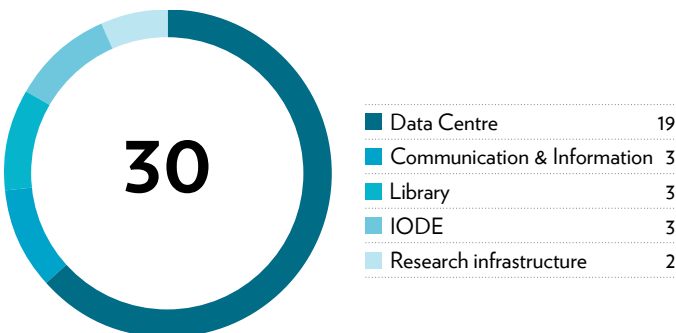
### UNAVAILABILITY FOR WORK

**20.5%**  
 Total number of days of absence (= leave, illness, etc.) versus the total number of days to be performed

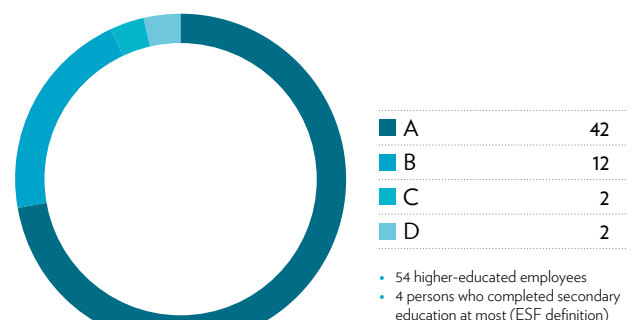
### SICKNESS ABSENCE

**1.4%**  
 Number of days on which staff reported sick versus the total number of days to be performed

### PERFORMANCE INTERVIEWS



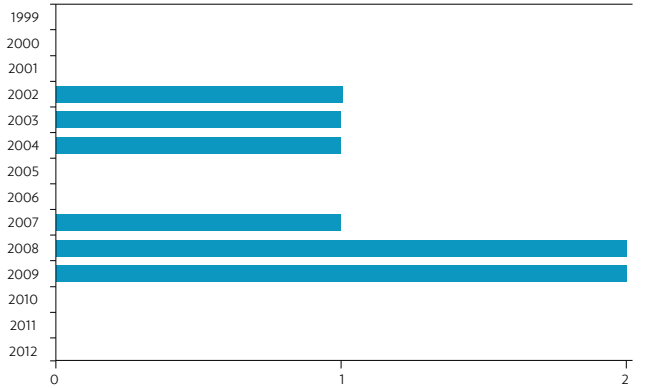
### LEVEL OF EDUCATION



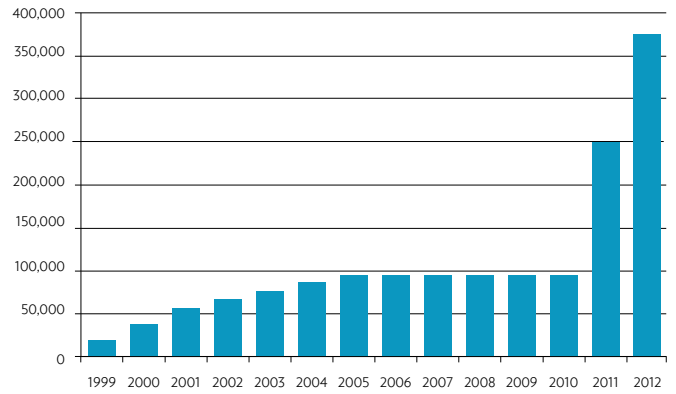
### TRAINING COURSES

**17** Total number of training courses taken by staff

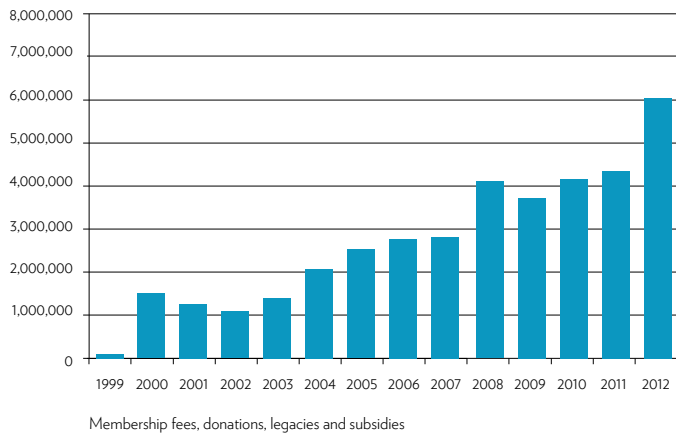
**MENTION OF THE TERM 'MARINE' IN DOCUMENTS OF THE FLANDERS SCIENCE POLICY DEPARTMENT (EWI)**



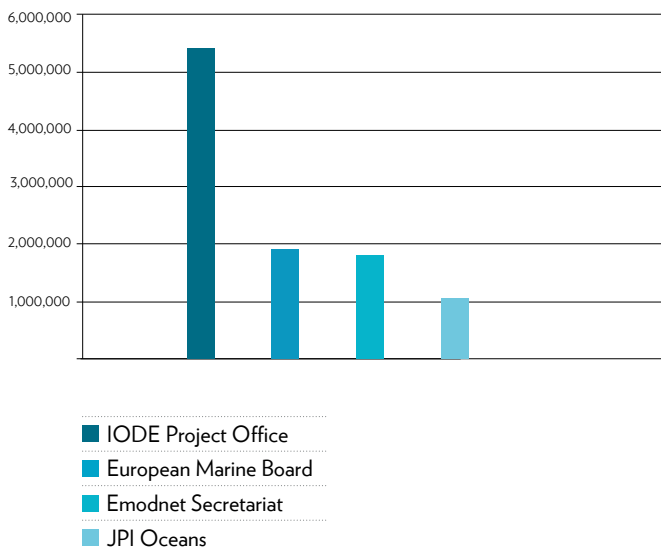
**SOCIAL LIABILITIES (in euro)**



**VLIZ TURNOVER (in euro)**

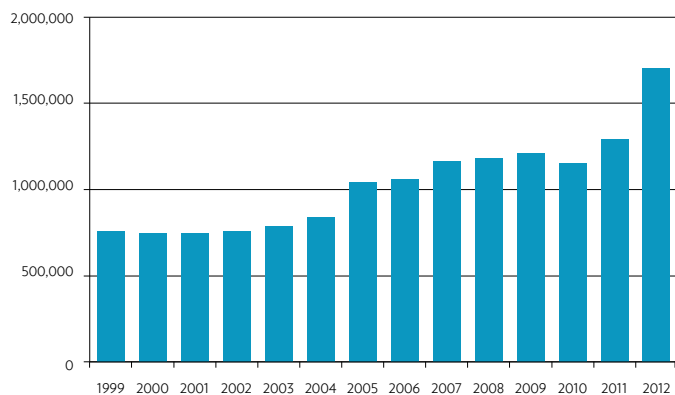


**TURNOVER OF OTHER PARTNERS IN 2012 (in euro)**

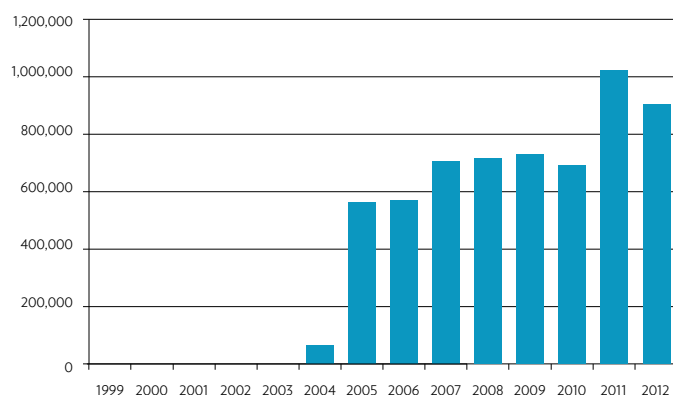


## OVERVIEW OF SUBSIDIES

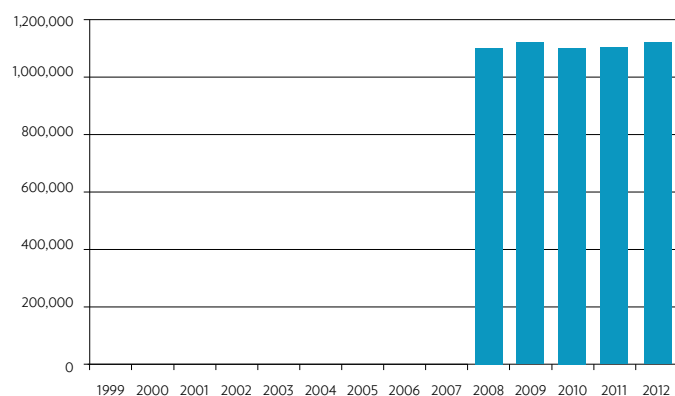
### SUSIDIES OF FLEMISH GOVERNMENT (in euro)



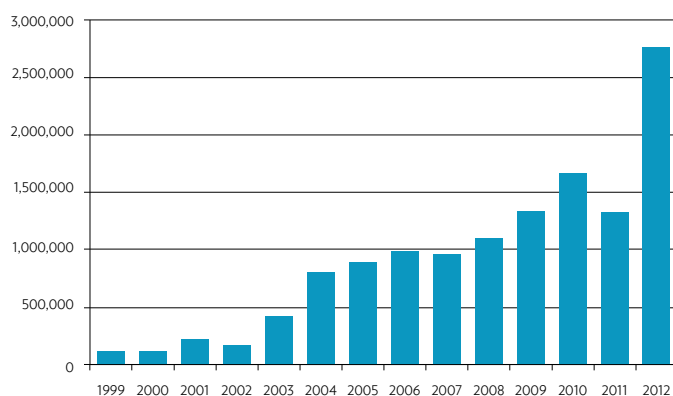
### INTERNATIONAL SUBSIDIES IOC, EMB, EMODNET SECRETARIAT, JPI OCEANS (in euro)



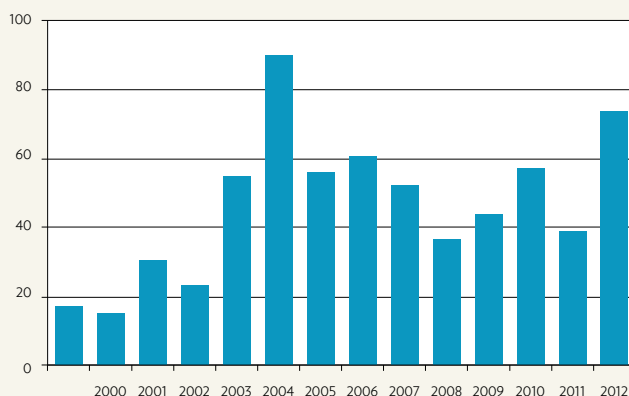
### INVESTMENTS (in euro)



### EXTERNAL FINANCING Lifewatch, province of West Flanders, national and international projects (in euro)

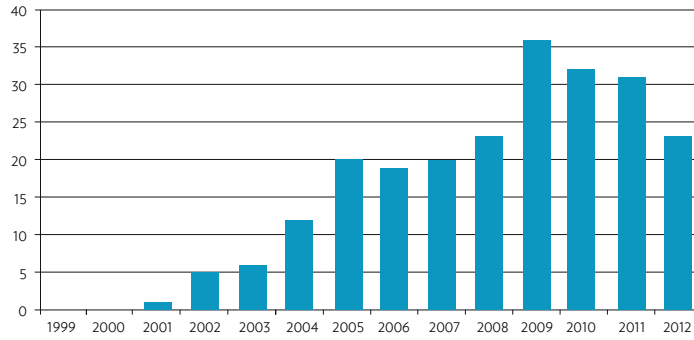


### EXTERNAL FINANCING VERSUS OTHER FINANCING (in %)



# Research Infrastructure division

## NUMBER OF PUBLICATIONS ON VLIZ RESEARCH FACILITIES (RV SIMON STEVIN / RV ZEELEEUW AND GREENHOUSES)



## SCIENTIFIC PROJECTS

99



Number of scientific projects which have made use of RV Simon Stevin / RV Zeeleeuw since 1999

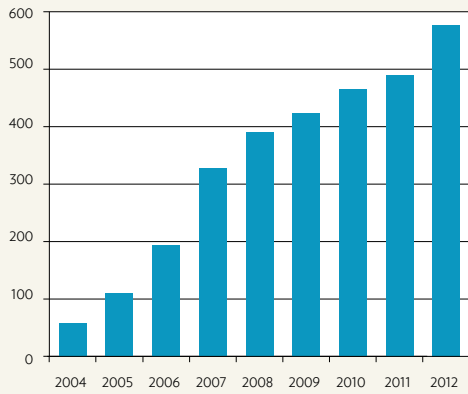


© VLIZ

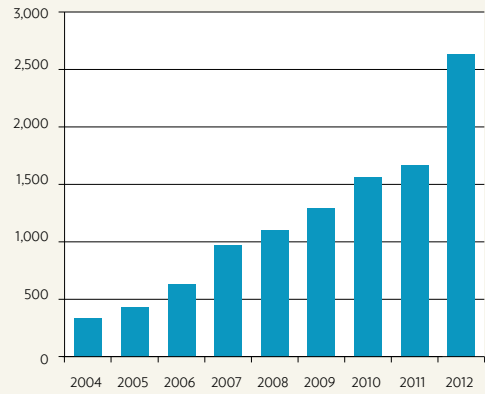
# Data Centre division

## ARCHIVED AND DISCLOSED DATA SETS

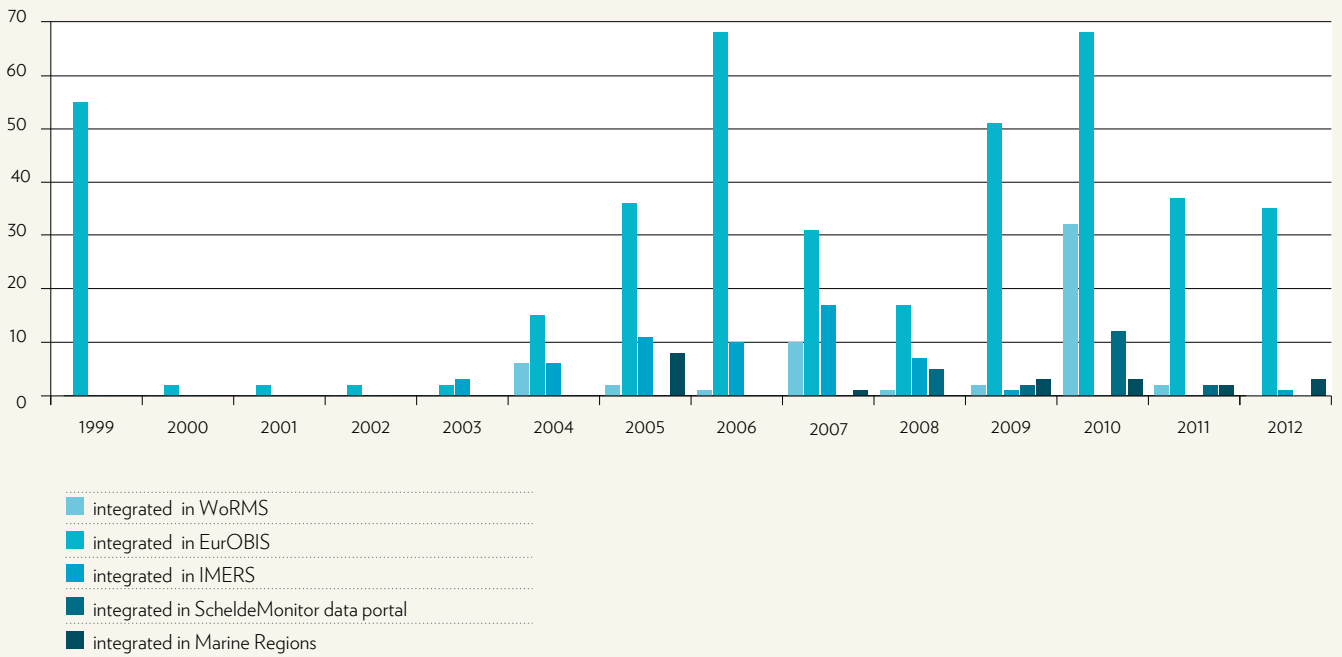
### ARCHIVED DATA SETS



### DISCLOSED DATA SETS



### INTEGRATED DATA SETS

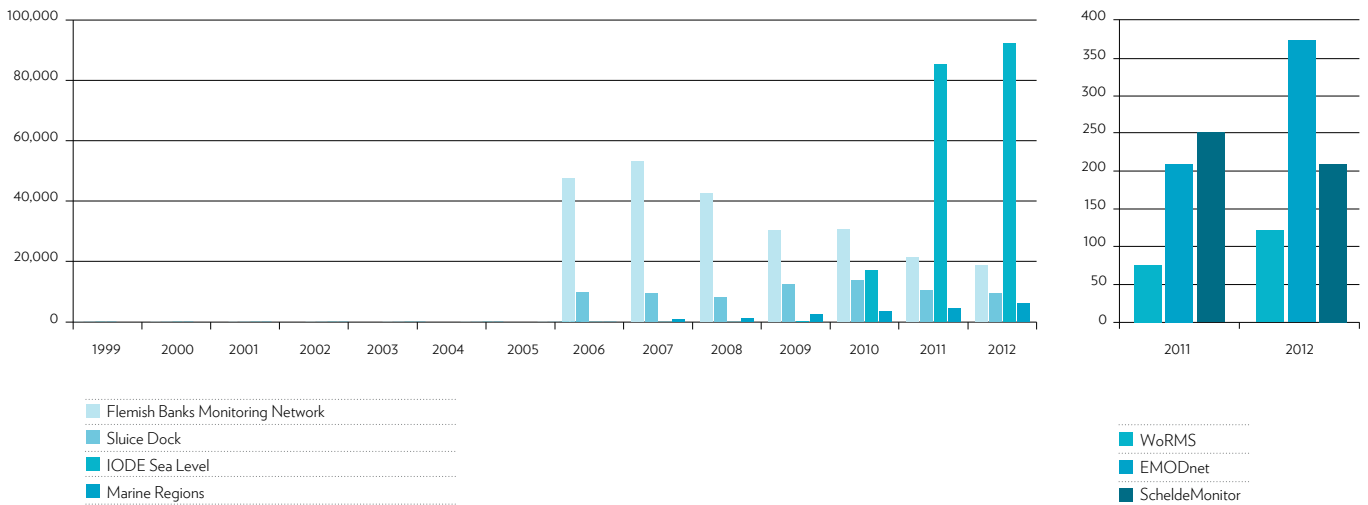


### SUPPLIED DATA

111

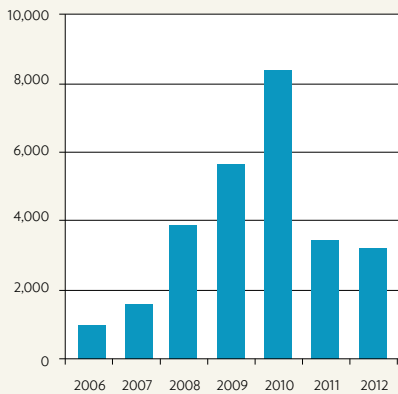
Number of data requests (via [data@VLIZ.be](mailto:data@VLIZ.be)) in 2012

## DOWNLOADS OF DATA



## DOWNLOADS OF INFORMATIVE PRODUCTS

### DE GROTE REDE



### TEACHING PACKAGES

1,045 

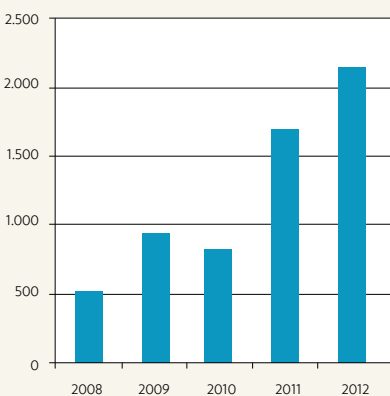
Since 01.11.2011

### SIMON STEVIN PRODUCTS

29,838 

Since 01.09.2012

### ZEEKRANT



### VIDEOS

134,754 

Period 2005-2012

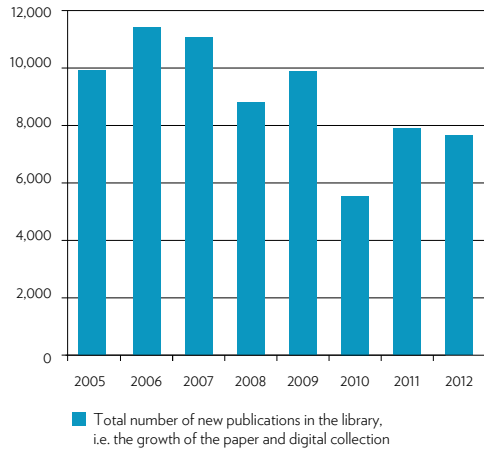
### PICTURES

12,051,802 

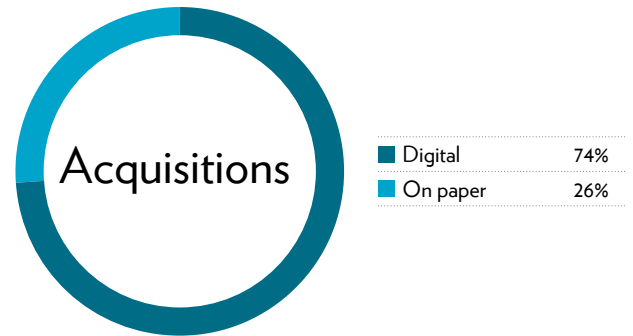
Period 2005-2012

# Marine Library division

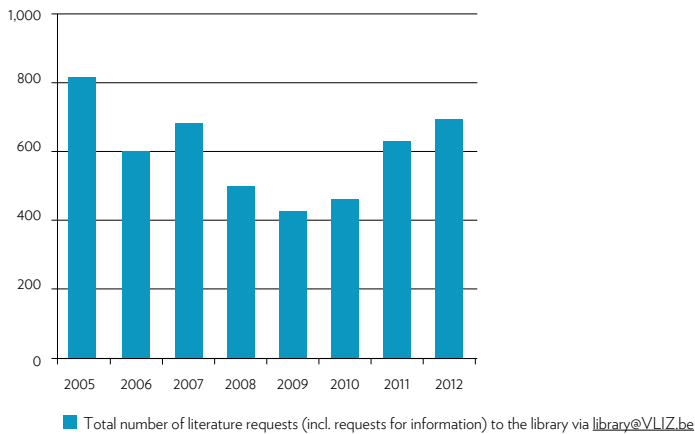
## GROWTH OF LIBRARY COLLECTION



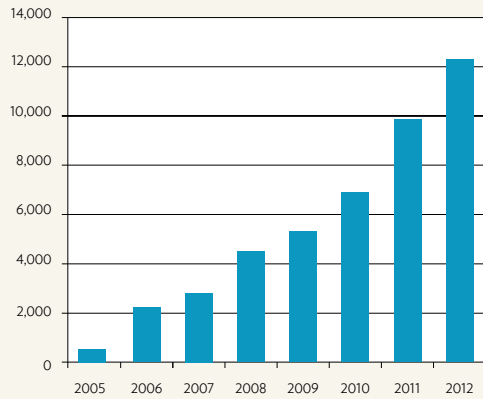
## ACQUISITIONS IN 2012



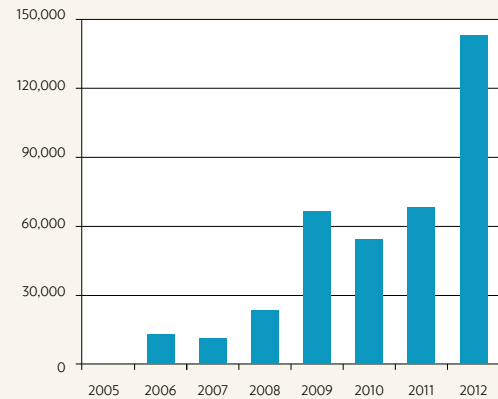
## LITERATURE REQUESTS IN THE LIBRARY



### REFERENCES IN THE OPEN MARINE ARCHIVE



### TOTAL NUMBER OF DOWNLOADS FROM THE OPEN MARINE ARCHIVE



### UNIQUE TITLES DOWNLOADED FROM THE OPEN MARINE ARCHIVE IN 2012

10,197 

Total number of downloads in 2012

### OTHER ITEMS FROM THE OPEN ACCESS COLLECTION

7,995 

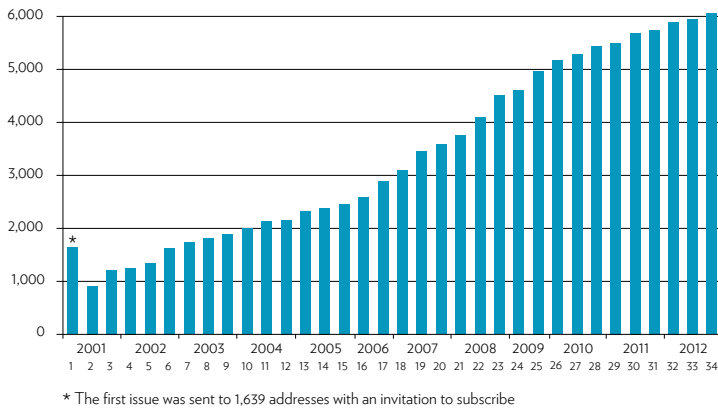
Unique titles downloaded in 2012

140,790 

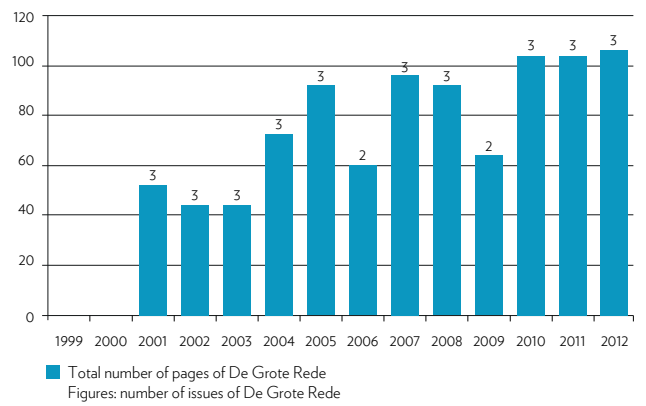
Total number of downloads in 2012

# Communication & Information division

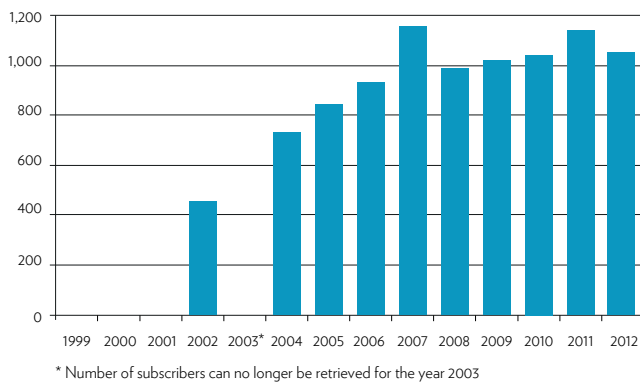
## NUMBER OF SUBSCRIBERS TO DE GROTE REDE



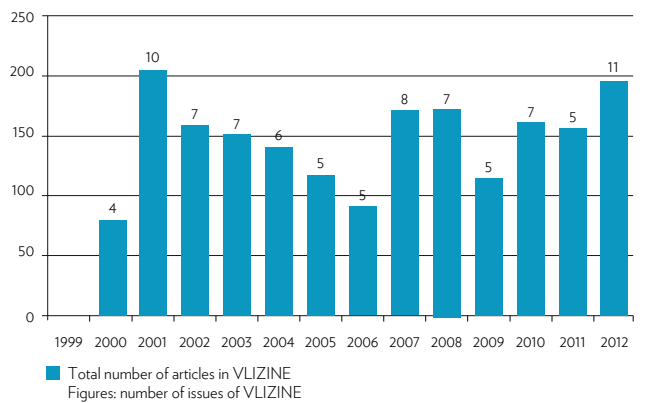
## PAGES AND ISSUES OF DE GROTE REDE



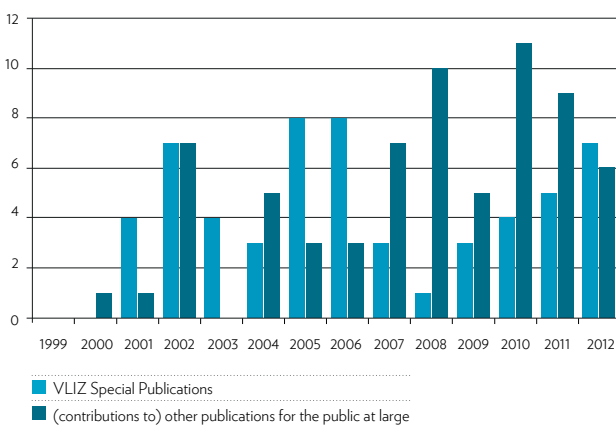
## NUMBER OF SUBSCRIBERS TO VLIZINE



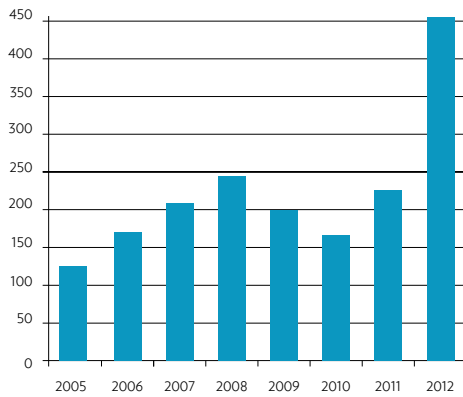
## ARTICLES AND ISSUES OF VLIZINE



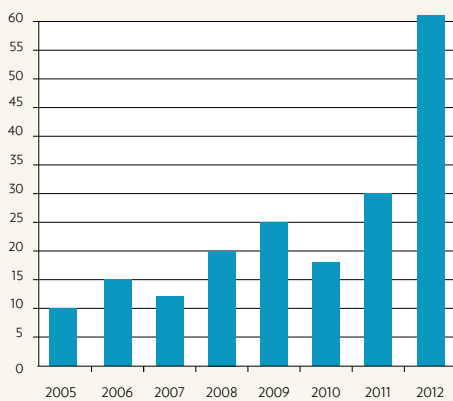
## OTHER PUBLICATIONS



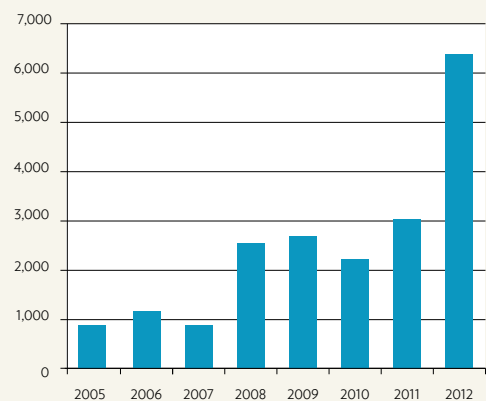
### REQUESTS FOR INFORMATION ANSWERED BY VLIZ IN ITS ENTIRETY



### NUMBER OF EVENTS ORGANISED



### NUMBER OF PARTICIPANTS IN ORGANISED EVENTS



### GENERAL PUBLIC REACHED BY MEANS OF LECTURES

# 72

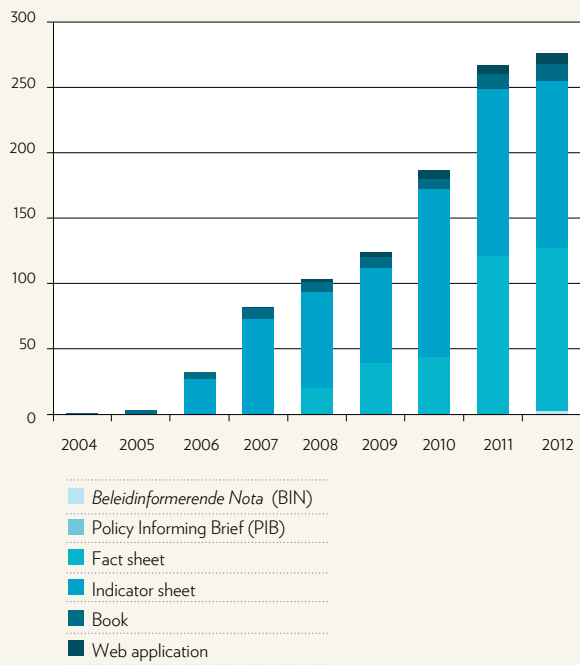
Informative lectures in 2012

# 3,203

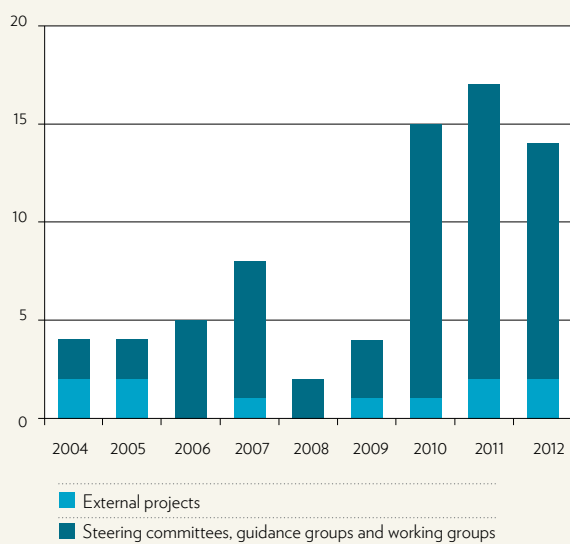
Members of the general public reached

# Figures & Policy division

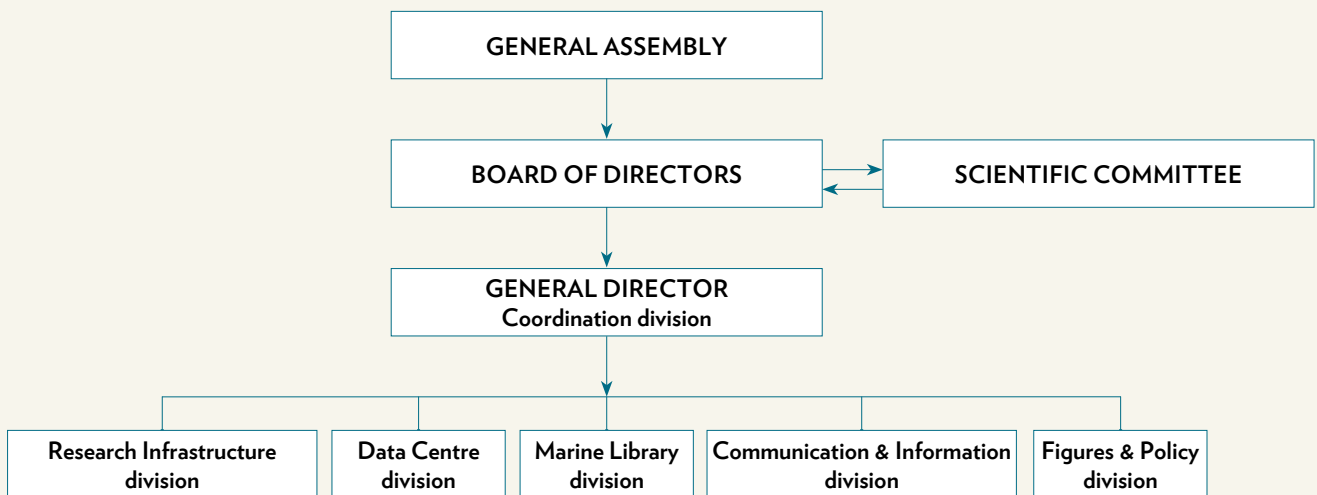
## INFORMATION PRODUCTS



## COOPERATION AGREEMENTS AS TO POLICY DEVELOPMENT AND SUPPORT



# VLIZ organisation



The Flanders Marine Institute (VLIZ) is an autonomous institute with the legal status of a non-profit organisation under Belgian law that receives an annual subsidy from the Flemish Community and from the province of West-Flanders. VLIZ is administrated by a Board of Directors, but its daily operations are overseen by the general director, assisted by the Coordination division. A permanent team of scientists in the Scientific Committee, which advises the Board of Directors, is consulted several times a year to define and adjust its scientific support tasks. A General Assembly is convened at the request of the Board of Directors or by the chairman to take specific managerial and administrative decisions.

# Composition of the Board of Directors

at the end of 2012

Pursuant to the articles of association the Board of Directors is composed of 14 members.

Mr Carl Decaluwé, governor of West Flanders, is **the chairman**.

## Eight members were nominated by the Flemish government:

- Mr Colin Janssen, Ghent University, vice-chairman
- Mr Paul Breyne, honorary governor
- Mr Jean Berlamont, KU Leuven University
- Mr Yves Goossens, VLOOT (Shipowner of the Authorities) - Agency for Maritime Services and Coast (MDK)
- Ms Ilse Hoet, Department of Mobility and Public Works
- Ms Brenda Utterwulghe, Blauwvoet bvba
- Mr Philip Van Avermaet, Department of Economy, Science and Innovation
- Ms Magda Vincx, Ghent University

## The two members nominated by the province of West Flanders are:

- Mr Guido Decorte, member of the Provincial Executive (secretary)
- Ms Hilde Veulemans, member of the Provincial Council

## The three other members are:

- Ms Ann Overmeire, Innovation, Provincial Development Agency of West Flanders
- Mr Paul Gerard, AG Haven Oostende
- Mr Willy Versluys, fishing vessel owner

## The government commissioners are:

- Mr Luc Gobin, on behalf of the Flemish Minister for Finance
- Ms Marie Claire Van de Velde, on behalf of the Flemish Minister for Science Policy

## Attend the meetings:

- Mr Rudy Herman, Department of Economy, Science and Innovation
- Mr Jan Mees, VLIZ and rapporteur

# Composition of the General Assembly

at the end of 2012

Mr Carl Decaluwé, governor of West Flanders, is **the chairman**.

## The ten voting members appointed by the Flemish Community are:

- Prof Dr Patric Jacobs, Ghent University
- Prof Dr Willy Baeyens, Vrije Universiteit Brussel
- Prof Dr Jean Berlamont, KU Leuven University
- Prof Dr Ernest Schockaert, Hasselt University
- Prof Dr René Van Grieken, University of Antwerp
- Prof Dr Magda Vincx, Ghent University
- Mr Philip Van Avermaet, Department of Economy, Science and Innovation
- Ms Ulrike Vanhessche, Coast Guard secretariat (MDK)
- Ms Ilse Hoet, Port and Water Policy division (MOW)
- Eng. Jan Strubbe, honorary director-general of the Waterways and Maritime Affairs Administration

## The four voting members appointed by the province of West Flanders are:

- Mr Guido Decorte, member of the Provincial Executive
- Mr Bart Naeyaert, member of the Provincial Executive
- Mr Patrick Braet, provincial treasurer
- Mr Jan Denys, principal of the Mercator Maritime Institute

## The member appointed by the Research Foundation – Flanders (FWO) is:

- Dr Eng Elisabeth Monard, secretary general of the Research Foundation – Flanders

The members of the Board of Directors of VLIZ have the right to attend and participate in the General Assembly but are not entitled to vote.

# Scientific Board

at the end of 2012

The Scientific Board consists of 14 effective and 14 substitute members. Its composition was approved by the Board of Directors on 27.10.2010.

## The chairman is the vice-chair of the Board of Directors:

- Colin Janssen

## Two delegates from Ghent University (UGent):

- Magda Vincx (substitute: David Van Rooij)
- Patrick Sorgeloos (substitute: Julien De Rouck)

## Two delegates from KU Leuven University (KU Leuven):

- Filip Volckaert (substitute: Gregory Maes)
- Jaak Monbaliu (substitute: Erik Toorman)

## One delegate from Vrije Universiteit Brussel (VUB):

- Loreto De Brabandere (substitute: Marc Kochzius)

## One delegate from the University of Antwerp (UA):

- Patrick Meire (substitute: Gudrun De Boeck)

## One delegate from Hasselt University (UHasselt):

- Tom Artois (substitute: Natalie Beenaerts)

## One delegate from the Institute for Agricultural and Fisheries Research (ILVO):

- Kris Cooreman (substitute: Bart Sonck)

## One delegate from the Research Institute for Nature and Forest (INBO):

- Jurgen Tack (substitute: Eric Stienen)

### One delegate from the Flemish Institute for Technological Research (VITO):

- Roger Dijkmans (substitute: Bart Deronde)

### One delegate from the Flemish Environment Agency (VMM):

- Steven Vinckier (substitute: Marleen Van Steertegem)

### One delegate from the Flanders Heritage Agency (AOE):

- Marnix Pieters (substitute: Tom Lenaerts)

### One delegate from Flanders Hydraulics Research (FHR):

- Frank Mostaert (substitute: Toon Verwaest)

### Attend the meetings:

The general manager and a rapporteur from the Flanders Marine Institute (VLIZ):

- Jan Mees, general manager
- Jan Seys (substitute: Nancy Fockedeey)

### A representative of the Department of Economy, Science and Innovation (EWI):

- Rudy Herman

# Networks in which VLIZ participates

## National networks

- VLIZ Scientific Committee
- editorial team and etymological team of De Grote Rede
- member of the Executive Committee and Consultative Group of the Coordination Centre for Integrated Coastal Zone Management (CC-ICZM)
- member of the Science Information Network (WIN) of the Flemish government
- member of the Flanders Environmental Library Network (FELNET)
- member of the Flemish Association for Libraries, Archives and Documentation Centres (VVBAD)
- member of the Flemish Research Libraries Council (VOWB)
- member of the Board of Directors of Flanders' Maritime Cluster
- member of the Board of Directors of the Flanders Knowledge Center Water vzw (VLAKWA)
- member of the Flemish Aquaculture Platform
- member of the Flemish Marine Biotechnology Platform
- member of the Flemish Platform for Algae Research
- member of the 'Stel je vraag.be' consortium (RBINS)

## International networks

- member of the IODE data centre network (UNESCO/IOC)
- host of the UNESCO/IOC Project Office for IODE
- member of the 'Partnership for Observation of the Global Oceans' (POGO)
- member of the POGO 'News & Information Group'
- representative of the Research Foundation – Flanders in the Marine Board of the European Science Foundation (ESF)
- host of the European Marine Board secretariat
- member and chair of the European Marine Board Communications Panel (MBCP)
- member of JPI Oceans
- member of the European Centre for Information on Marine Science and Technology (EurOcean)
- member of Euromarine (cluster of three European marine FP6 networks: EUR-OCEANS, MarBEF and Marine Genomics Europe)
- member and data centre of MarBEF+, the European network concerning Marine Biodiversity and Ecosystem Functioning
- member of the European Network of Marine Research Institutes and Stations (MARS)
- member of the European Research Vessel Organisation (ERVO)
- member of the International Research Ship Operators (IRSO)
- member of the European Federation of Marine Science and Technology Societies (EFMS)
- member of the European Association of Aquatic Sciences Libraries and Information Centres (EURASLIC)
- member of the International Association of Aquatic and Marine Science Libraries and Information Centres (IAMSLIC)
- member of the National Marine Educators Association (NMEA) and founding member of the EMSEA European Marine Science Educators Association
- national input centre of Aquatic Sciences and Fisheries Abstracts (ASFA) of the Food and Agriculture Organisation (FAO)
- member of the European Census of Marine Life (EuroCoML)
- member of the Society for the Management of European Biodiversity Data (SMEBD)

- member of the executive committee of the European Register of Marine Species (ERMS)
- member of the ICES Study Group on Biodiversity Science (SGBIODIV) and Working Group on Data and Information Management (WGDIM)
- member and cochair of the ICES Working Group on the History of Fish and Fisheries (WGHIST)
- member of the steering committee of the World Register of Marine Species (WoRMS)
- partner of the Sea Data Network (SeaDataNet)
- member of the International Coastal Atlas Network (ICAN)
- partner of the Global Sea Level Observing System Network (GLOSS)
- coordinator of the European node (EurOBIS) of the Ocean Biogeographic Information System (OBIS)
- host of the Flemish-Dutch Scheldt Commission (VNSC-Communication)
- member of the World Data System (WDS) of the International Council for Science (ICSU)
- member of the LifeWatch National Centres network (LiNC)
- member of the European Marine Biodiversity Observatory System (EMBOS)
- member of Species 2000
- member of INSPIRE Thematic Working Group on Biogeographical Regions, Habitats and Biotopes and Species Distributions
- member of the Coastal Wiki Editorial Board
- member of the Marine Observation and Data Expert Group (MODEG)

## VLIZ employees furthermore participate in various (temporary and project-related) advisory and consultative committees, including:

- East Bank of Ostend steering committee
- Flanders Bays steering committee
- Advisory Committee of Nature and Forest Agency (ANB) East Coast
- Coastal Consultation of the Province of West Flanders
- Flood Team of the Province of West Flanders
- chair of the Coastal Compass 2012 working group
- member of the Local Group of Axis 4 of the Belgian Operational Programme for the Fisheries Industry
- Surveillance, early warning and rapid response – IAS (Invasive Alien Species)
- member of the Occupational Fields Advisory Committee of Hogeschool Zeeland
- IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices GE-BICH
- guidance groups and end-user committees of several research projects (incl. Belcolour-II, LECOFISH, CLIWAT, BEES, ECOPLAN, WAKO-II)

## Support to international organisations

### UNESCO/IOC Project Office for IODE

The Flemish government has supported the UNESCO/IOC Project Office in Ostend since 2005 by making office space available and by providing four local employees as well as operational funding. Thanks to this support Flanders contributes to the development of international coordination with regard to oceanography and to the promotion of sustainable use and development of coastal areas worldwide.

The Ostend project office accommodates the secretariat of the International Oceanographic Data and Information Exchange Programme (IODE) of UNESCO's Intergovernmental Oceanographic Commission (IOC). The IODE programme has ensured and coordinated the exchange of oceanographic data between member states from all over the world since 1961. An international network of 80 National Oceanographic Data Centres (NODC) has been created, which together manage millions of marine data, check their quality and archive them to make them available to researchers from across the world. The economic advantage of exchanging biological, chemical and physical information between member states is huge. Another one of IODE's tasks is making oceanographic literature (marine information) accessible, especially for partners in developing countries.

**Training courses.** The UNESCO/IOC Project Office for IODE in Ostend is primarily a training centre where oceanographic data and information managers can acquire the necessary knowledge and skills thanks to the OceanTeacher Academy Project (OTA). OceanTeacher is an intelligible web-based training system which provides class training (face-to-face) as well as mixed training (combination of class and distance training), online lessons and online self-study.

In 2012 the UNESCO/IOC Project Office for IODE organised five training courses within the scope of the OceanTeacher Academy project and facilitated three additional training courses funded by other organisations. A total of 177 students from 62 countries participated in these training activities and six other students took a distance-training course. The students stayed in Ostend for a total number of 856 person days (person day: duration of the training x number of students).

## TRAINING COURSES IN 2012

		PARTICIPANTS
OceanTeacher Academy Course DM: Marine GIS applications using ArcGIS	19-23.03.2012	18+6*
OceanTeacher Academy Course MIM: Preservation of Books and Other Media	21-25.05.2012	15
SeaDataNet 2 Training Course	2-6.07.2012	51
OceanTeacher Academy Course DM: Operational Oceanography: Synoptic View of the Sea	10-14.09.2012	22
OceanTeacher Academy Course MIM: Grant Writing for Digitisation Projects	17-21.09.2012	12
PEGASO Hands-on Training Workshop	22-25.10.2012	29
OceanTeacher Academy Course DM: Marine and Coastal Atlas Development	05-09.11.2012	24
IODE Training Course for the Caribbean Marine Atlas	10-14.12.2012	6

\* six participants took the course at INCOIS, Hyderabad (India) via video conferencing.  
 MIM: Marine Information Management; DM: Data Management  
 Source: [www.IODE.org](http://www.IODE.org) > IODE Calendar



AN OCEANTEACHER TRAINING COURSE ON THE PRESERVATION OF BOOKS AND OTHER MEDIA TOOK PLACE IN OSTEND FROM 21 TO 25 MAY 2012. – Here you can see the group (15 participants) during a visit to the construction site of the new city library in Bruges.

**Meeting place.** The UNESCO/IOC Project Office for IODE in Ostend is also a meeting place where experts and data and information managers can discuss and develop IODE projects. A total of 23 meetings, workshops and individual expert visits were organised and 256 guest researchers visited the project office in Ostend in 2012. They stayed there for a period of one to 120 days, which results in a total of 888 person days.



**AD SESSION OF THE JOINT JCOMM-IODE STEERING COMMITTEE.**– hoc The steering committee met in Ostend from 23 to 25 april 2012 to draw up marine data standards within the scope of the pilot project "Ocean Data Standards". Left to right: Yutaka Michida, Paul Oloo, Charles Sun, Bob Keeley, Peter Pissierssens and Nicola Scott.

## MEETINGS & WORKSHOPS IN 2012

		<b>PARTICIPANTS</b>
IODE-FAO Workshop on AgriOcean DSpace	23.01.2012	14
SG OceanDocs-I: 1st Meeting of the IODE Steering Group for OceanDocs	24-27.01.2012	15
2012 IODE Officers Meeting [videoconference]	30.01-02.02.2012	21
Internship Katty Riquelme	01-28.02.2012	1
Secondment/internship Du Quionwei	11.02-12.06.2012	1
Technical Workshop on the IODE OceanDataPortal	27-29.02.2012	31
Inter-sessional working group for updating the IOC Strategic Plan for Oceanographic Data and Information Exchange (2012-2015)	01-02.03.2012	26
Visit Bob Keeley	14-29.04.2012	1
SG-GTSP-1: First Session of the Joint IODE-JCOMM Steering Group for the Global Temperature-Salinity Profile Programme	16-20.04.2012	34
Ad hoc Session of the Joint JCOMM-IODE Steering Group for the Ocean Data Standards Pilot Project	23-25.04.2012	9
Second OBIS Technical Meeting	21-22.06.2012	15
Visit Mark Costello	24-26.09.2012	1
ETDMP-III: Third Session of the JCOMM/IODE Expert Team on Data Management Practices	16-19.10.2012	15
IOC Capacity Building Meeting (Venu Ittekot)	01-02.10.2012	1
Visit Charles Sun	16-27.10.2012	1
Second IODE Workshop on Quality Control of Chemical and Biological Oceanographic Data Collections	22-24.10.2012	15
Ad hoc Session of the GE-BICH	25.10.2012	10
Harmful Algal Bloom (HAB) training course preparatory meeting (Jacob Larsen and Rafael Salas)	29-31.10.2012	2
SG-OBIS -2012: Steering Group for Ocean Biogeographic Information System (OBIS)	19-21.11.2012	28
Session of the IODE Steering Group for the ICAN Pilot Project	26.11.2012	
ETMC-4: Fourth meeting of the Expert Team on Marine Climatology	26-28.11.2012	26
International Coastal Atlas Network (ICAN): Meeting of European and African participants	26.11.2012	NA
6 <sup>th</sup> Joint Capacity Building Meeting	10.12.2012	10
Visit Iouri Oliounine	19-20.12.2012	1

Source: [www.ioode.org](http://www.ioode.org) > IODE Calendar



**THE IODE PROJECT OFFICE USED VIDEO CONFERENCING ON A LARGE SCALE TO ORGANISE MEETINGS AND CLASSES FOR THE FIRST TIME IN 2012.** The year began with an IODE officers meeting that took place exclusively online. From 30 January to 2 February a daily video conference was organised with IODE Officers from various regions across the world. Left to right: Mika Odido (ODINAFRICA project manager), Peter Pissierssens (manager of IOC Project Office for IODE) and Claudia Delgado (training coordinator).

© IODE

**Infrastructure and staff.** The training facilities of the UNESCO/IOC Project Office for IODE consist of a conference room accommodating 150 people, a spacious training room for 24 students with facilities for remote interaction with speakers / lecturers (via video conferencing) and 30 computers. Besides offices for employees, a workroom for expert visitors is also available. The IODE Project Office manages 88 websites (20 of which were new in 2012), including websites of data centres of member states that do not have the capacity to manage them locally. At the end of December 2012 the IODE Project Office in Ostend had seven employees, three of whom were paid by means of international budgets and four of whom were paid by means of Flemish subsidies via VLIZ. Mika Odido (ODINAFRICA project manager) left the Ostend office to coordinate the IOC Sub-Commission for Africa in Nairobi (Kenya) in February. In May 2012 Ward Appeltans joined the team to manage OBIS (Ocean Biogeographic Information System) and the IODE Ocean Data Portal.

**Video conferencing.** The IODE project office used video conferencing on a large scale to organise meetings and classes for the first time in 2012. The year began with the first IODE officers meeting, which took place exclusively online. After this successful experience, discussions were organised through video conferencing for every meeting in Ostend. Some of these discussions could be followed via live stream by a wider audience. This technique was applied for the first time in OceanTeacher in March 2012. Eighteen students travelled to Ostend to take the Marine GIS training course. At the same time, another group of six students from Hyderabad (India) participated in the same training course via video conferencing. The two groups attended theoretical lectures while an INCOIS assistant coached the students offline in Hyderabad and another assistant supervised the practical work in Ostend.



THE SECOND IODE-OBIS STEERING GROUP MEETING WAS HELD IN OSTEND FROM 19 TO 21 NOVEMBER 2012

© IODE

**OBIS secretariat relocated to Ostend.** The Ocean Biogeographic Information System (OBIS) was established in 2000 as the data and information component of the decennial network “Census of Marine Life”. The OBIS secretariat was hosted from Rutgers University (USA). The IOC member states admitted OBIS as part of the International Oceanographic Data and Information Exchange Programme (IODE) of IOC in June 2009. They advised to establish a new UNESCO/IOC Project Office for OBIS and to locate it in the Ostend offices. IOC allocated additional budget for an OBIS programme specialist, so that Ward Appeltans (previously project manager at VLIZ) was hired in May 2012. Additional budget was also allocated for an OBIS data manager (who will take up the post in 2013).

OBIS provides access to the largest (and ever growing) online data system in the world for the distribution, diversity and abundance of marine biodiversity ([www.iobis.org](http://www.iobis.org)). It has currently collected 1,130

data sets so that 35 million observations with a geographic frame of reference of 120,000 marine species are freely available on the Internet, ranging from the poles to the equator, from the ocean surface to the deepest seabeds, and from bacteria to whales. A important asset of OBIS is that the species observations are integrated with data concerning the habitat (depth) and the environment (salinity, temperature, oxygen and nutrients: nitrate, phosphate, silicate, etc.), so that it is an important source of information for studies of climate change and environmental effects. Over 80 international publications mentioned OBIS or made use of OBIS data in 2012.

## EUROPEAN MARINE BOARD secretariat

The European Marine Board (EMB) was founded in 1995 to facilitate closer collaboration between the European organisations involved in marine sciences (research institutes, research funders and national consortia of marine institutes).

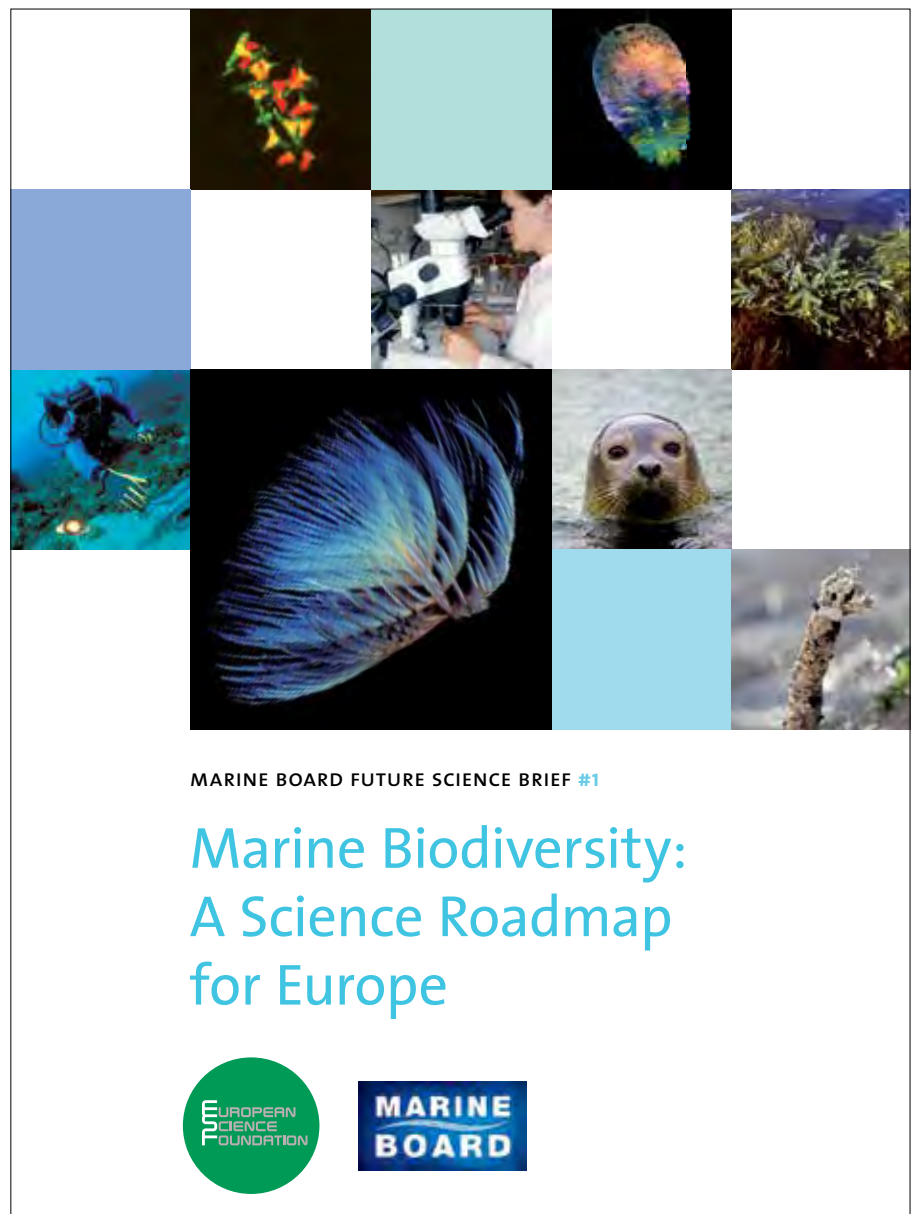
The organisation provides a Pan-European platform for its member organisations to establish common priorities, to promote marine research and to close the gap between science and policy. For instance, the EMB is developing a common understanding of the research priorities and strategies for marine sciences in Europe. The European Marine Board represented 35 member organisations from 20 countries in 2012.

Two new employees joined the team in the secretariat office at the InnovOcean site in Ostend in 2012: Dr Kate Larkin took up the position of Science Officer in February, as did Dr Nan-Chin Chu in August after the departure of Ms Maud Evrard in June 2012.

For more information, please visit: [www.marineboard.eu/about/secretariat](http://www.marineboard.eu/about/secretariat).

**Expert groups.** The EMB working groups bring European scientists and other experts together in order to draw up a position document on a marine topic of strategic importance for Europe. Such a position document contains scientific recommendations and strategic policy suggestions to influence the current and future national and European research agendas. Since its foundation the EMB has initiated and facilitated over a dozen working groups regarding a wide variety of scientific research. The following working groups were active in 2012:

- Marine Protected Areas: [www.marineboard.eu/completed-working-groups](http://www.marineboard.eu/completed-working-groups)
- Oceans and Human Health: [www.marineboard.eu/oceans-and-human-health](http://www.marineboard.eu/oceans-and-human-health)
- Marine Microbial Diversity: [www.marineboard.eu/completed-working-groups](http://www.marineboard.eu/completed-working-groups)



**Publications.** The EMB publications are aimed at European and national research programme managers, strategic developers, policy makers and the marine research community. They analyse the state-of-the-art of the topic in question and provide a phased plan with concrete recommendations to improve European research in this field. EMB publications drive the future European and national marine research agendas and programmes as well as support actions and policy. The EMB published two new policy reports in 2012:

- Marine Biodiversity: A Science Roadmap for Europe (Future Science Brief 1, September 2012) – Reveals gaps in our knowledge and research capacity, investigates the political landscape for marine biodiversity both in Europe and internationally, and contains a phased plan for European marine biodiversity research.
- Marine Microbial Diversity and its role in Ecosystem Functioning and Environmental Change (Position Paper 17, May 2012) – Provides an overview of European marine microbial research as well as a set of recommendations to support European research in the medium term.

For more information, please go to: [www.marineboard.eu/publications](http://www.marineboard.eu/publications).



**LEADING SCIENTISTS PRESENT NEW TRENDS IN MARINE RESEARCH AND TECHNOLOGIES AT THE THIRD EUROPEAN MARINE BOARD OPEN FORUM IN BRUSSELS.** – Panel discussion with the following speakers (left to right): John Delaney (University of Washington, USA), Manuela Soares (DG Research & Innovation, European Commission), David Murphy (AquaTT, Ireland), Stephen de Mora (Plymouth Marine Laboratory, UK) and Harry Kolar (IBM Research).

© EMB

**Marine Board Open Forum.** The third European Marine Board Open Forum ‘*New Technologies for a Blue Future*’ took place at the Royal Flemish Academy of Belgium for Science and the Arts (KVAB) in the centre of Brussels on 18 April 2012. Experts from the academic world, industry and policy from 71 organisations met at the forum. The event highlighted innovation hotspots for the European marine sector with examples of the latest technologies for the promotion of growth, new applications for human well-being and tools for the next generation of marine knowledge. Leading European scientists presented new and emerging technologies (ranging from sensor development to offshore renewable energy), thereby confirming Europe’s position as a world leader in various marine and maritime sectors. The forum pointed out the permanent need for pioneering research to drive the future economy and stressed the importance of investing in marine knowledge. *Multi-stakeholder* cooperation was emphasised as crucial to accelerated commercialisation and driving new growth.

For more information, please go to: [www.marineboard.eu/fora/3rd-marine-board-forum](http://www.marineboard.eu/fora/3rd-marine-board-forum).



**OVER 30 REPRESENTATIVES OF NATIONAL MARINE RESEARCH FUNDING AGENCIES, EUROPEAN RESEARCH INSTITUTES AND MARINE INDUSTRIAL STAKEHOLDERS MET IN OSTEND.** – Geoffrey O’Sullivan (Irish Marine Institute) gives a presentation at the Atlantic Consultative Workshop of the FP7 project “SEAS-ERA” (InnovOcean site, Ostend, 28-29 February 2012)

© EMB

**European projects.** The European Marine Board participates in framework programme projects of the European Commission to catalyse cooperation between European marine and maritime stakeholders, stimulate the joint establishment of priorities and avoid duplication. The EMB was a partner in the following FP7 projects in 2012:

- EMAR2RES: Cooperation between the Communities of European MARine and MARitime REsearch and Science (November 2009 – May 2012);
- MARCOM+: Towards an Integrated Marine and Maritime Science Community (January 2010 – April 2012);
- MARINEBIOTECH: Coordination Support Action in Marine Biotechnology (October 2011 – March 2013);
- SEAS-ERA: Towards Integrated Marine Research Strategy and Programmes (May 2010 – April 2014);
- STAGES: Science and Technology Advancing Governance of Good Environmental Status (September 2012 – August 2014).

# JPI OCEANS

The start-up of Joint Programming Initiatives (JPIs), whereby EU member states are encouraged to combine national research funds and to further structure cooperation in the field of research policy, aims to better tackle societal challenges in Europe. One of the ten selected societal challenges for which a JPI was established was “Healthy and Productive Seas and Oceans”, or JPI Oceans for short (in 2010). From the start, this initiative was developed by a core group representing Flanders/Belgium, Norway and Spain. After the entry of Poland and Lithuania into JPI Oceans at the end 2012, the number of participating countries is currently eighteen.

**New office.** The new JPI Oceans office in Brussels was officially opened in October 2012. This office’s inauguration was the first occasion on which a specific office space was allocated to a Joint Programming Initiative for the international team working in the JPI Oceans secretariat.

**Advisory Board.** Important changes took place in 2012 for the Joint Programming Initiative of Healthy and Productive Seas and Oceans, or “JPI Oceans” for short. The 17 members of JPI Oceans’ Strategic Advisory Board met for the first time in the summer months. They had previously been selected from over 70 candidates nominated by the world of science, industry and civil society. The purpose of the Advisory Board is to provide neutral and independent advice and assistance to the Management Board. With this mandate the advisory board will contribute to the preparation of a Strategic Research and Innovation Agenda (SRIA) and an Implementation Plan (iPlan).

**CSA Oceans.** CSA (Coordination and Support Action) Oceans is a support action started up under the 7<sup>th</sup> framework programme of the European Union in the autumn of 2012. For three years eleven partners from nine countries will collaborate to make the JPI Oceans initiative operational. Within the CSA Oceans project, VLIZ is responsible for the communication and outreach. The Flemish government contributes € 200,000 a year to the support of the JPI Oceans initiative and VLIZ has seconded a full-time staff member to the JPI Oceans secretariat since 8 August 2011.



**OFFICIAL OPENING OF THE JPI OCEANS OFFICE IN BRUSSELS.** – The new office in Troonstraat/Rue du Trône 130 in Brussels was officially inaugurated on 9 October 2012. Besides the required office space for all members of the JPI Oceans secretariat it also boasts a spacious conference room for approx thirty participants as well as teleconferencing facilities. Left to right: Kristine Gramstad (State Secretary, Norwegian Ministry of Fisheries and Coastal Affairs) and Arvid Hallén (Director-General of the Research Council of Norway).

© JPI Oceans

## EMODnet secretariat

EMODnet, the European Marine Observation and Data Network, is part of the European “Marine knowledge 2020” initiative. Through this project the European Commission aims to disclose the abundance of marine observations and invest in sustainable growth and employment. By collecting existing and new knowledge and measurements and by making them optimally accessible, the efficiency of research conducted by companies, the government and researchers will be considerably increased, resulting in new, innovative proposals.

**Central data portal.** Over the past three years VLIZ has developed the EMODnet biological data portal. VLIZ will also create and maintain a central data portal from 2013 onwards. For more information please refer to the Data Centre chapter (page 47).

**EMODnet secretariat.** In 2012 Maria Damanaki, European Commissioner for Maritime Affairs and Fisheries, decided to accept the offer made by Flemish minister Ingrid Lieten to install the central EMODnet secretariat at the InnovOcean site in Ostend. The Flemish government reserves € 180,000 a year to support the EMODnet secretariat and intends to invest in hardware, IT support, office equipment and the development of the central data portal through VLIZ. This way Flanders makes a valuable contribution to the Europe 2020 targets (employment, innovation, education and coping with climate change). The European Commission’s new EMODnet secretariat at the InnovOcean site will neighbour VLIZ, the UNESCO / IOC Project Office for IODE of UNESCO’s Intergovernmental Oceanographic Commission (IOC), the European Marine Board and Provinciaal Ankerpunt Kust.



## Projects – external financing

VLIZ received external financing for coordination, communication and/or data management within the scope of 29 projects in 2012. Most of these projects were carried out in cooperation with research groups.

### EU

#### **4D4LIFE** – *Distributed Dynamic Diversity Databases for Life*

Duration: 01.05.2009 - 30.04.2012

Development of a data infrastructure for the distributed biodiversity database 'Catalogue of Life' ([www.4d4life.eu](http://www.4d4life.eu)). VLIZ gives advice and represents the World Register of Marine Species (WoRMS).

#### **CSA MarineBiotech** – *ERA-NET Preparatory Action in Marine Biotechnology*

Duration: 01.10.2011 - 31.03.2013

The social and economic importance of marine biotechnology is steadily increasing. However, the current marine biotechnological landscape in Europe is highly fragmented and lacks coordination. The European FP7 project 'CSA MarineBiotech' ([www.marinebiotech.eu](http://www.marinebiotech.eu)) is intended to realise common programmes and collaborations by preparing an ERA-NET in marine biotechnology. For this purpose there is close collaboration with research funders and stakeholders in marine biotechnology from various European countries. VLIZ coordinates the communication tasks within the CSA.

#### **CSA Oceans** – *JPI Oceans Preparatory Action*

Duration: 01.09.2012 - 31.08.2015

This FP7 support action is designed to make the transition from the startup phase to the operational phase of JPI Oceans as smooth as possible. This 3-year action is specifically aimed at 1) supporting the operation of management structures to develop JPI Oceans; 2) promoting the realisation of a strategic research and innovation agenda (SRIA) as well as an implementation plan (iPlan) in line with the vision and objectives of JPI Oceans; and 3) proposing procedures and tools to further long-term cooperation within JPI Oceans. VLIZ coordinates the communication tasks within the CSA.

#### **EMBOS** – *Development and implementation of a pan-European Marine Biodiversity Observatory System*

Duration: 01.02.2011 - 01.02.2015

This COST project focuses on the coordination and management of a marine biological observation network linked to LifeWatch.

#### **EMODnet** – *European Marine Observation and Data Network*

Duration of lot 3 (biology): 15.05.2009 - 15.05.2012

Duration of lot 4 (chemistry): 24.06.2009 - 24.06.2012

Pilot projects to determine how a European marine observation and data network should be developed in order to optimally support the new European integral marine strategy. VLIZ is responsible for the biological pilot project ([bio.emodnet.eu](http://bio.emodnet.eu)). It will use the existing European atlas with distribution data of marine species (EurOBIS) as a basis and further complete it. VLIZ is also involved in the chemical section of EMODnet.

### **EUROBASIN** – *Base Scale Analysis, Synthesis and Integration*

Duration: 01.05.2011 - 30.04.2012

Aimed at better understanding the processes that influence ecosystems in the North Atlantic Ocean on the basis of recent and historical data and in collaboration with partners from Europe, Canada and the United States. VLIZ's task is to trace historical data on plankton and fish within the study area.

### **EUROFLEETS** – *Towards an Alliance of European Research Fleets*

Duration: 01.09.2009 - 31.08.2013

A network of 24 European research institutes that want to deploy their vessels and research infrastructure more efficiently and develop a central system in order to gain access to other European research vessels ([www.eurofleets.eu](http://www.eurofleets.eu)). VLIZ coordinates a recommendation for an ecological regional research fleet and contributes to the development of a strategic view of the European research fleet.

### **EuroMarine** – *Integration of European Marine Research Networks of Excellence*

Duration: 01.02.2011 - 30.01.2013

EuroMarine integrates three major European marine FP6 networks (EUR-OCEANS, MarBEF and Marine Genomics Europe) into one organisation: the EuroMarine Consortium. VLIZ integrates the data and develops / updates the website ([www.euromarineconsortium.eu](http://www.euromarineconsortium.eu)).

### **GIFS** – *Geography of Inshore Fishing and Sustainability*

Duration: 01.07.2011 - 30.06.2014

Aimed at exploring the socio-economic and cultural importance of inshore fisheries in the study area (Interreg 2 Seas) and developing a demonstration project with a view to strengthening the fishing community. VLIZ is responsible for the historical survey of inshore fisheries, its socio-economic importance, the link with integrated coastal zone policy, and the image of inshore fisheries in seaside tourism. Cooperation with the Coordination Centre for Integrated Coastal Zone Management is planned.

### **HERMIONE** - *Hotspot Ecosystem Research and Man's Impact on European Seas*

Duration: 2011-2012

Within WP5 of the HERMIONE project VLIZ was asked to develop a database which integrates all available data sets so that scientists can easily analyse the distribution and interconnectivity of chemosynthetic ecosystems.

### **iMarine** – *Data e-Infrastructure Initiative for Fisheries Management and Conservation of Marine Living Resources*

Duration: 01.11.2011 - 31.05.2013

This project is intended to create and maintain a data infrastructure to support the management of fisheries and other natural resources according to the principles of the ecosystem approach.

**ISECA** – *Information System on the Eutrophication of our Coastal Areas*

Duration: 01.07.2011 - 30.06.2014

This Interreg project is aimed at creating an information platform concerning eutrophication in the Channel area. It should include an information system (with regard to the actors in this study area), data and communication products as well as an evaluation tool for monitoring the water quality by means of earth observations.

**KNEU** – *Developing a Knowledge Network for EUropean expertise on biodiversity and ecosystem services to inform policymaking economic sectors*

Duration: 01.11.2010 - 30.10.2013

VLIZ develops the website ([www.biodiversityknowledge.eu](http://www.biodiversityknowledge.eu)) with an integrated information system for external and internal communication of the Network of Knowledge (NoK) for European expertise on biodiversity and ecosystem services.

**MERMAID** - *Innovative multi-purpose offshore platforms: planning, design and operation*

Duration: 01.01.2012 - 31.12.2015

MERMAID will develop concepts for the next generation of offshore platforms which can be used for multiple purposes, including energy extraction, aquaculture and platform-related transport. MERMAID will examine new concepts which combine various functions. VLIZ is responsible for project dissemination & outreach, and organises a high-level end user conference among other things. Belgian end users include DEME, De Nul, Flanders' Maritime Cluster and Versluys. VLIZ takes care of the communication within the MERMAID project.

**Micro B3** - *Marine Microbial Biodiversity, Bioinformatics and Biotechnology*

Duration: 01.01.2012 - 31.12.2015

Micro B3 intends to develop innovative bioinformatic approaches and a legal framework to make large-scale data on marine viral, bacterial, archaeal and protists genomes and metagenomes accessible for marine ecosystem biology and to define new targets for biotechnological applications.

**MARBIGEN** - *Supporting research potential for MARine Biodiversity and GENomics in the Eastern Mediterranean*

Duration: 01.11.2010 - 30.04.2014

Within the scope of this project, VLIZ will be part of the Board of External Advisors and provide training courses to employees of the Institute of Marine Biology and Genetics (IMBG) in Crete with regard to data management of marine biodiversity information.

**PEGASO** – *People for Ecosystem Based Governance in Assessing Sustainable Development of Ocean and Coast*

Duration: 01.02.2010 - 31.01.2014

Within this consortium, VLIZ collaborates on the development of a 'spatial data infrastructure' and the preparation of indicators, scenarios and socio-economic evaluations for the Mediterranean Sea and the Black Sea. As data and information co-ordinator, VLIZ is responsible for ensuring the flow of (meta)data and information between partners and end users, e.g. through the website [www.pegasoproject.eu](http://www.pegasoproject.eu).

**Sea for Society**

Duration: 01.06.2012-30.11.2015

This project will develop modalities for stakeholder participation with regard to the concept of Blue Society. Surveys and consultations of target groups will be organised in different European regions by means of developed protocols. The project is coordinated by Nausicaa, and VLIZ is participating as a member of EurOcean. Especially at a later stage of the project, VLIZ will collaborate on the organisation of stakeholder meetings in Belgium.

### SeaDataNet 2 – *A Pan-European Infrastructure for ocean and marine data management*

Duration of SeaDataNet2: 01.10.2011 - 30.09.2015

Professional data centres from 35 countries collaborate to make the data sets collected by the pan-European oceanographic research fleet and the new automated observation systems available within one efficiently distributed data system ([www.seadatanet.org](http://www.seadatanet.org)). VLIZ supplies the (meta)data and information collected in Flanders.

### THESEUS – *Innovative technologies for safer European coasts in a changing climate*

Duration: 01.12.2009 - 30.11.2013

Collaboration between coastal engineers and marine ecologists from more than 30 European research groups who study coastal defence with combined efforts, with a focus on the sea level rise. VLIZ coordinates the dissemination of information and communication.

## Fisheries & Oceans Canada

### CaRMS – *The Canadian Register of Marine Species*

Duration: continuous

VLIZ coordinates the quality control of the Canadian Register of Marine Species and is responsible for the maintenance and further developments of the database and website ([www.marinespecies.org/carms](http://www.marinespecies.org/carms)).

## The Province of West Flanders

### Coastal Compass

Duration: 01.04.2012 - 31.10.2012

The Coastal Compass covers 21 indicators and places them in a wider context. The information from the barometer is disclosed in a different manner in the Coastal Compass. The first edition was launched in March 2006.

### Zwin-project

Duration: 01.10.2012 - 30.06.2013

The task of VLIZ in the Zwin project is:

- The creation of an online database structure.
- The collection and disclosure of the contents of all published materials related to the Zwin nature reserve in line with the criteria established in consultation with the province of West Flanders.
- An exploratory analysis of unpublished materials with proposed disclosure of these materials. A distinction is made between materials whose disclosure takes priority and other materials whose disclosure does not take priority in consultation with the province of West Flanders.

## Flemish government, Waterwegen en Zeekanaal (W&Z)

**OMES** (fase V) – *Research on the environmental effects of the SIGMA plan*

Duration: 01.04.2011 - 30.04.2012

Phase VI: 01.02.2012-30.04.2013

VLIZ is responsible for the integrated OMES database and ensures its dissemination through the OMES website ([www.vliz.be/projects/omes](http://www.vliz.be/projects/omes)).

## Flemish government, Maritime Access division

**SCHELDEMONITOR** (2011 & 2012) – *Flemish-Dutch knowledge platform for research and monitoring of the Scheldt Estuary*

Duration of 2011 phase: 01.12.2010 - 31.12.2011; extended to 31.12.2013

The website [www.scheldemonitor.org](http://www.scheldemonitor.org) offers information and, since 2010, data as well in support of the cross-border monitoring and research in the Scheldt Estuary.

## Flemish government, Flemish Department of Foreign Affairs

**FOCA** – *Ferries Observando Canales Australes*

Duration: 01.04.2010 – 30.01.2012

Real-time oceanographic parameters from the South-East Pacific, measured along fixed ferry routes, are made freely available. VLIZ supports this project by means of data systems, data management and data storage, and by making computing capacity available.

## Flemish government, Research Institute for Nature and Forest (INBO)

**2011-2012 implementation contract** – *Development of information and data centre of INBO*

Duration: 01.12.2011 – 30.11.2012

The MDA and IMIS data and information systems were adapted in such a way that they can be accessed and used by INBO. Collective work was also carried out on an initial overview of biodiversity data and information present at INBO.

## Hercules Foundation

### LIFEWATCH – *Flemish contribution to LifeWatch.eu*

Duration: 01.01.2012 - 31.12.2012

The Flemish contributions to the LifeWatch infrastructure are coordinated by the Research Institute for Nature and Forest (INBO) and, as far as the marine component is concerned, by the Flanders Marine Institute (VLIZ). Flanders contributes to the central LifeWatch infrastructure through a taxonomic backbone. Marine, freshwater and terrestrial observatories are developed regionally, as are different biodiversity data systems, web services and models.

## UNESCO

### Unesco/Indian Ocean

Duration: 23.01.2012-30.04.2012

VLIZ developed a website for UNESCO with regard to the World Heritage Marine Programme and for the implementation of the project "Development of a regional comparative assessment of potential areas with Outstanding Universal Value in the Indian Ocean, with a focus on areas under the jurisdiction of African countries" in collaboration with UNESCO/IOC and IODE and the University of Queensland (Australia).

# Scientific equipment and infrastructure

Overview of scientific equipment and infrastructure for scientific research made available by the VLIZ.

## Physico-chemical parameters

- Zeeleeuw and De Haan weather stations
- CTD CTD48M
- CTD SBE-19plus
- CTD SBE-19plusV2
- Seabird SBE43 oxygen sensor
- Fluorimeter
- LISST-100
- OBS-3
- Secchi disk
- Thermosalinograph
- Cohesive Strength Meter (CSM)

## Water sampling

- Niskin 10 litre bottle
- Niskin 5 litre bottle
- GO-FLO
- Carrousel Water Sampler (6 Niskin 4 litre bottles and accompanying CTD SBE19plusV2)

## Sediment sampling

- Van Veen grab
- Reineck Box Corer
- Bowers & Connoly Multi-Corer
- Hamon grab

## Biological sampling

- Apstein Plankton Net
- Bongo net
- Neuston net
- MIK net
- WP2 plankton net
- Trawl plankton net
- Plankton pump
- Hyperbenthic sledge
- 3-metre beam trawl
- Otter trawl
- Pelagic otter trawl
- Van Veen grab
- Reineck Box Corer
- Hamon grab
- Bowers & Connolly Multi-Corer
- Hydrophone / Passive Acoustic Monitoring (PAM system)

## Miscellanea

- Compressor for filling diving cylinders
- Sieving table
- Fish sorting table
- Wilson Automated Siever
- DGPS hand-held unit
- Mini ROV (incl. video camera)
- Underwater photo camera
- Tripod
- Underwater Diver Receiver

## Storage space

- Warehouses
- Freezers
- Cold store – Core Depository

# Events organised, co-organised and facilitated by VLIZ in 2012

## 57 EVENTS – 6291 PARTICIPANTS

			PARTICIPANTS		
24.01.2012	Central Dredging Association (CEDA) board meeting	InnovOcean site, Ostend	30	CEDA	VLIZ facilitates
01.02.2012	Marine biotechnology in Flanders working meeting	't Pand, Ghent	32	VLIZ in collaboration with EWI & UGent	Workshop
24.02.2012	VLIZ Young Marine Scientists' Day	KHBO, Bruges	312	VLIZ	Seminar
27-29.02.2012	ISECA meeting	InnovOcean site, Ostend	20	VLIZ within the scope of ISECA project	Workshop (international)
15-16.03.2012	EuroMarine workshop	InnovOcean site, Ostend	15	VLIZ within the scope of EuroMarine project	Workshop (international)
28.03.2012	Reform of European Fund for Maritime Affairs and Fisheries: presentation & debate	InnovOcean site, Ostend	45	Department of Agriculture & Fisheries	VLIZ facilitates
29.03.2012	Marine Science meets Maritime Industry	InnovOcean site, Ostend	86	Flanders Maritime Cluster	VLIZ facilitates
10.04.2012	Beaufort04 – educational project	InnovOcean site, Ostend	15	VLIZ	VLIZ facilitates
19-20.04.2012	European Marine Board Communication Panel	InnovOcean site, Ostend	15	VLIZ in collaboration with EMB	Workshop (international)
23-27.04.2012	2011-2012 Planeet Zee Expedition	RV Zeeleeuw	19	VLIZ in collaboration with VLOOT dab	Expedition
27.04.2012	2011-2012 Planeet Zee Expedition press conference	VLOOT dab, Ostend	30	VLOOT dab in collaboration with VLIZ	Press conference
02-04.05.2012	GIFS (Geography of Inshore Fishing and Sustainability) Stakeholder Meeting	Arnemuiden, the Netherlands	20	Municipality of Middelburg (NL) and Greenwich University (UK) in collaboration with VLIZ	Workshop (international)
04.05.2012	Workshop "Fishing for Norway lobster in Flanders"	InnovOcean site, Ostend	92	ILVO - Fisheries	VLIZ facilitates
07.05.2012	Syntra training course "Regiogids Kust"	InnovOcean site, Ostend	15	Syntra West with the cooperation of VLIZ	Training course
08.05.2012	Visit to Thornton Bank construction site by Geotechnics Division	InnovOcean site, Ostend	50	Dredging International	VLIZ facilitates
10.05.2012	IWT info session as to funding of international research: focus on the marine industry	InnovOcean site, Ostend	30	IWT with the cooperation of VLIZ	Workshop
10.05.2012	UPV seminar: recent developments of and in the oceans	InnovOcean site, Ostend	65	Uitstraling Permanente Vorming vzw	Seminar
11.05.2012	Team activity of Flemish Innovation Centres	InnovOcean site, Ostend	50	Flemish Innovation Centres	VLIZ facilitates
21.05.2012	Signing of renewed cooperation agreement between VLOOT dab & VLIZ	VLOOT dab, Ostend	30	VLOOT dab in collaboration with VLIZ	Press conference
25.05.2012	Press conference as to arrival of RV Simon Stevin in Ostend	Post Foxtrot, Ostend	15	VLOOT dab in collaboration with VLIZ	Press conference
26-28.05.2012	Ostend at Anchor	VLOOT dab, Ostend	1898	VLOOT dab in collaboration with VLIZ	Open house day
06.06.2012	Team activity of Mobility and Transport FPS – DG Maritime Transport & DG Land Transport & Inland Navigation	InnovOcean site, Ostend	120	Mobility and Transport FPS	VLIZ facilitates

			<b>PARTICI- PANTS</b>		
08.06.2012	Global Wind Day: Renewable Energy Base Oostende (REBO)	InnovOcean site, Ostend	30	REBO	VLIZ facilitates
08.06.2012	World Oceans Day 2012 – Dive into the unknown	KHBO, Bruges	134	VLIZ	Open house day
13-15.06.2012	LifeWatch Stakeholders Board	InnovOcean site, Ostend	20	VLIZ in collaboration with University of Amsterdam	Workshop (international)
18.06.2012	Christening of Wandelaar	InnovOcean site, Ostend	200	VLOOT dab	VLIZ facilitates
23.06.2012	National Marine Educators Association Conference - workshop for teachers	Anchorage, Alaska	30	NMEA with the cooperation of VLIZ	Workshop (international)
26.06.2012	Press conference of Belgian Minister Vande Lanotte	InnovOcean site, Ostend	50	Cabinet of the Belgian Minister for the North Sea	VLIZ facilitates
02-06.07.2012	MMM3: Meeting on Mangrove ecology, functioning and Management	Galle, Sri Lanka	123	VUB	VLIZ facilitates
20.07.2012	EuroMarine Summer School - workshop for teachers	Porto, Portugal	25	EuroMarine with the cooperation of VLIZ	Workshop (international)
07-08.08.2012	EuroFleets: final workshop Work Package eco-responsibility & eco-design for European research vessels	InnovOcean site, Ostend	20	VLIZ within the scope of EuroFleets project	Workshop (international)
09.08.2012	WorMS – deep sea portal meeting	InnovOcean site, Ostend	6	VLIZ	Workshop (international)
17.08.2012	Educational boat trip for Syntra training course “Regiogids Kust”	RV Simon Stevin	15	VLIZ with the cooperation of Syntra West	Training course
23.08.2012	Signing of institutional covenant between Marine@UGent and VLIZ	InnovOcean site, Ostend	62	VLIZ in collaboration with Marine@UGent	Press conference
26-31.08.2012	International Diatom Symposium	Aula Academia UGent, Ghent	250	PAE-UGent	VLIZ facilitates
03.09.2012	North Sea Spatial Planning Cabinet	InnovOcean site, Ostend	20	Cabinet of the Belgian Minister for the North Sea	VLIZ facilitates
05-07.09.2012	ICES Study Group on History of Fish and Fisheries (WGHIST)	InnovOcean site, Ostend	15	VLIZ in collaboration with ICES	Workshop (international)
13.09.2012	Christening of RV Simon Stevin.	VLOOT dab, Ostend	240	VLIZ in collaboration with VLOOT dab	Press conference
15.09.2012	Presentation of the book “Garnalen – verhalen en recepten van vroeger en nu” by Katrien Vervaele & Nancy Fockedeey	Fish market, Nieuwpoort	160	VLIZ in collaboration with Promovis, City of Nieuwpoort and Lannoo	Press conference
17-20.09.2012	CoastLab 12 - 4th International Conference on the Application of Physical Modelling to Port and Coastal Protection	't Pand, Ghent	160	AWW-UGent	VLIZ facilitates
21.09.2012	Working session of European Fund for Maritime Affairs and Fisheries: presentation & debate in Ostend	InnovOcean site, Ostend	40	Department of Agriculture & Fisheries	VLIZ facilitates
25.09.2012	Guide training course “Zee op de korrel”: “Zeespiegelstijging ruimer gekaderd” (Sea level rise within a wider context)	InnovOcean site, Ostend	25	Nature and Environmental Education service of the province of West Flanders	Training course
11.10.2012	CAW Artevelde-Fisheries team day	InnovOcean site, Ostend	7	CAW Artevelde - Fisheries	VLIZ facilitates

			<b>PARTICIPANTS</b>		
12.10.2012	First European Ocean Literacy Conference	Provinciaal Hof, Bruges	107	VLIZ in collaboration with EMB, EMSEA, MBA, UoG, NMEA, CoE	Conference (international)
15.10.2012	“Broodje Kwal” afternoon session – Axis 4 of the European Fisheries Fund	InnovOcean site, Ostend	20	Axis 4 of the European Fisheries Fund	VLIZ facilitates
22.10.2012	Syntra training course “Regiogids Kust”	InnovOcean site, Ostend	15	Syntra West with the cooperation of VLIZ	Training course
22-25.10.2012	PEGASO workshop on Spatial Data Infrastructures	InnovOcean site, Ostend	20	VLIZ	Workshop (international)
27.10.2012	Flemish ACW congress	InnovOcean site, Ostend	35	RESOC Oostende	VLIZ facilitates
13.11.2012	Seminar “De Kust van Nature: 1500 tot 2100”	InnovOcean site, Ostend	130	Natuurpunt in collaboration with VLIZ	Seminar
17.11.2012	Workshop at congress of the Science Teachers Association (VeLeWe)	UHasselt	45	VeLeWe and VOB with the cooperation of VLIZ	Training course
22.11.2012	VALDUVIS afternoon session – Axis 4 of the European Fisheries Fund	InnovOcean site, Ostend	20	Axis 4 of the European Fisheries Fund	VLIZ facilitates
23.11.2012	Flanders Bays stakeholder meeting	InnovOcean site, Ostend	146	Flanders Bays	VLIZ facilitates
25.11.2012	Science Day: RV Simon Stevin open to the public	Quenast Kade, Bruges	600	VLIZ in collaboration with VLOOT dab, Technopolis and EWI	Open house day
25.11.2012	Children’s University	HoWest, Bruges	160	VLIZ in collaboration with HoWest-Brugge and VLOOT dab	Open house day
27-29.11.2012	Littoral 2012	Thermae Palace, Ostend	180	Coordination Centre for Integrated Coastal Zone Management & EUCC with the cooperation of VLIZ	Conference (international)
03.12.2012	Syntra training course “Regiogids Kust”	InnovOcean site, Ostend	15	Syntra West with the cooperation of VLIZ	Training course
06.12.2012	FVB (Fund for Vocational Training in the Construction Industry) - West Flanders: economic development of Ostend	InnovOcean site, Ostend	55	RESOC Oostende	VLIZ facilitates
07.12.2012	Launch of the Coastal Compass	InnovOcean site, Ostend	30	Coordination Centre for Integrated Coastal Zone Management in collaboration with VLIZ	Press conference
12.12.2012	WoRMS Steering Committee Meeting	InnovOcean site, Ostend	12	VLIZ	Workshop (international)
13.12.2012	EMODnet species attributes workshop	InnovOcean site, Ostend	20	VLIZ	Workshop (international)
15.12.2012	Coastal guide seminar	Provinciaal Hof, Bruges	140	Nature and Environmental Education service of the province of West Flanders in cooperation with VLIZ	Seminar

# Publications 2012

## De Grote Rede

**Issue 32** (March 2012) with leading articles concerning orchids of the coast, the historical figure Simon Stevin, and the North Sea: once a densely populated river landscape

**Issue 33** (September 2012) with leading articles concerning tuna, geomorphology of the seabed worldwide, and Marian legends and worship of the Virgin Mary on the coast

**Issue 34** (December 2012) with leading articles concerning the history of Belgian oyster farming, seaside postcards, and groundwater salinisation on the coast

## VLIZINE

A total of 11 issues of the e-newsletter “VLIZINE” appeared in 2012 including a total of 196 articles

## Zeekrant 2012

This eight page annual publication of the Flanders Marine Institute and the province of West Flanders is printed in 75,000 copies. This newspaper was launched on 8 June 2012, World Oceans Day.

## Books

Vervaele, K.; Fockedeij, N. (2012). [gérnoars] **Garnalen: verhalen en recepten van vroeger en nu.**

Lannoo Publishers: Tiel. ISBN 978-94-014-0148-7. 198 pp.

Pattenden, A.; Baker, M.; Gunn, V.; Seys, J.; Bloksma, N. (2012). **Flessenpost.** Translated from English.

HERMIONE-INDEEP: Ostend. ISBN 978-0-9573052-7-4. [28] pp.

## Social Media

### Facebook:

- Facebook page “RV Simon Stevin”
- Facebook page “Garnaal” (shrimp)
- Facebook page “MarineArt”

### Twitter:

<https://twitter.com/jmeesvliz>

## VLIZ Special Publications

nr. 55: Mees, J.; Seys, J. (Ed.) (2012). [Book of abstracts - VLIZ Young Marine Scientists' Day](#). Brugge, Belgium, 24 February 2012. VLIZ Special Publication, 55. Flanders Marine Institute (VLIZ): Oostende. xi, 150 pp.

nr. 56: Claus, S.; Vandepitte, L.; Deneudt, K.; Hernandez, F.; Mees, J.; Vanhoorne, B.; Waumans, F.; Costello, M.J.; Garthe, S.; Herman, P.; Pesant, S.; Pinn, E.H.; Stienen, E.; Vanden Berghe, E.; Webb, T.; Arvanitidis, C. (2012). [Report of the Biological Data Analysis Workshop of the European Marine Observation and Data Network \(EMODnet\)](#). VLIZ Special Publication, 56. Vlaams Instituut voor de Zee (VLIZ): Oostende. 35 pp.

nr. 57: Dahdouh-Guebas, F.; Satyanarayana, B. (Ed.) (2012). [Proceedings of the International Conference 'Meeting on Mangrove ecology, functioning and Management - MMM3'](#), Galle, Sri Lanka, 2-6 July 2012. VLIZ Special Publication, 57. Vlaams Instituut voor de Zee (VLIZ): Oostende. ISBN 978-90-817451-6-1. xxxi, 192 pp.

nr. 58: Sabbe, K.; Van de Vijver, B.; Vyverman, W. (Ed.) (2012). [Twenty-second International Diatom Symposium](#), Aula Academica, Ghent, 26-31 August 2012. Abstracts. VLIZ Special Publication, 58. Protistology and Aquatic Ecology, Ghent University/National Botanic Garden of Belgium (NBGB): Gent. 260 pp.

nr. 59: Vandepitte, L.; De Pooter, D.; Lescauwaet, A.-K.; Fockedeij, N.; Mees, J. (Ed.) (2012). [Niet-inheemse soorten van het Belgisch deel van de Noordzee en aanpalende estuaria](#). VLIZ Special Publication, 59. Vlaams Instituut voor de Zee (VLIZ): Oostende. ISBN 978-90-817451-6-1-9-2, 371 pp.

nr. 60: Copejans, E.; Seys, J. (Ed.) (2012). [First conference on ocean literacy in Europe: Book of abstracts](#). Bruges, Belgium, 12 October 2012. VLIZ Special Publication, 60. Flanders Marine Institute (VLIZ): Oostende. vi, 45 pp.

nr. 61: Belpaeme, K.; McMeel, O.; Vanagt, T.; Mees, J. (Ed.) (2012). [Book of Abstracts. International Conference Littoral 2012: Coasts of Tomorrow](#). Kursaal, Oostende, 27-29 November 2012. VLIZ Special Publication, 61. Coordination Centre for Integrated Coastal Zone Management: Oostende. 210 pp.

nr. 62: Slabbinck, B.; Dewolf, A.; Desnijder, N.; Lauwaert, J. (Ed.) (2012). [De kust van nature - 1500 tot 2100: referatenboek van de studiedag](#). Oostende, 13 november 2012. VLIZ Special Publication, 62. Vlaams Instituut voor de Zee (VLIZ): Oostende. 24 pp.

## Fact sheets

### Historical figures:

VLIZ Wetenschatten (2012). [Gerardus Mercator](#). [Wetenschatten - Historische figuren van het zeewetenschappelijk onderzoek](#). VLIZ Information Sheets, 135. Vlaams Instituut voor de Zee (VLIZ): Oostende. 8 pp.

VLIZ Wetenschatten (2012). [Adrien de Gerlache](#). [Wetenschatten - Historische figuren van het zeewetenschappelijk onderzoek](#). VLIZ Information Sheets, 136. Vlaams Instituut voor de Zee (VLIZ): Oostende. 12 pp.

VLIZ Wetenschatten (2012). [Théodore-Augustin Mann](#). [Wetenschatten - Historische figuren van het zeewetenschappelijk onderzoek](#). VLIZ Information Sheets, 137. Vlaams Instituut voor de Zee (VLIZ): Oostende. 7 pp.

### Alien species:

VLIZ Alien Species Consortium (2012). [Slijkgrascicade – Prokelisia marginata](#). [Niet-inheemse soorten van het Belgisch deel van de Noordzee en aanpalende estuaria](#). VLIZ Information Sheets, 75. Vlaams Instituut voor de Zee (VLIZ): Oostende. 6 pp.

## Teaching packages

- Planet Zee learning module 'Exploration of ocean landscapes' for the subject of geography in the 3<sup>rd</sup> cycle of secondary education
- Planet Zee learning module 'The marine food chain' for the subject of biology in the 2<sup>nd</sup> and 3<sup>rd</sup> cycle of secondary education

## Short films

- Promotional video on the VLIZ Young Marine Scientists' Day 2012
- Promotional video on RV Simon Stevin

## Flyers etc.

- Flyer: World Oceans Day 08.06.2012 – Dive into the unknown
- Flyer: First European Conference on Ocean Literacy 12.10.2012
- Brochure: RV Simon Stevin (in Dutch, French and English)
- 2012 calendar
- 2012 tide book

## Contributions to other publications

- Nest special "Kust", summer 2012 – contribution to the coastal protection content
- De oceaan anders bekeken. Stel, J.H. (2012). Acco: Leuven & The Hague. ISBN 978-90-334-8803-0. 364 pp. – proofread and supplemented
- Maelfait, H.; Debergh, H.; Lescauwaet, A.-K.; Belpaeme, K. (Ed.) (2012). Het kustkompas: indicatoren als wegwijzers voor een duurzaam kustbeheer. Coordination Centre for Integrated Coastal Zone Management: Ostend. 80 pp.
- (2012). Coastal flooding: are we at risk? THESEUS Innovative technologies for safer European coasts in a changing climate. [VLIZ]/[KU Leuven]: Oostende & Leuven. 16 pp.
- (2012) Ionodazioni costiere siamo a rischio? THESEUS tecnologie innovative per coste Europee piu sicure in un clima che cambia. [VLIZ]/[KU Leuven]/[UniBo]: Oostende & Leuven. 16 pp.
- Verborgten Vissen. Pittau, F.; Gervais, B. (2012). Lannoo. ISBN 978-98-014-0438-9. 12 pp. – proofread