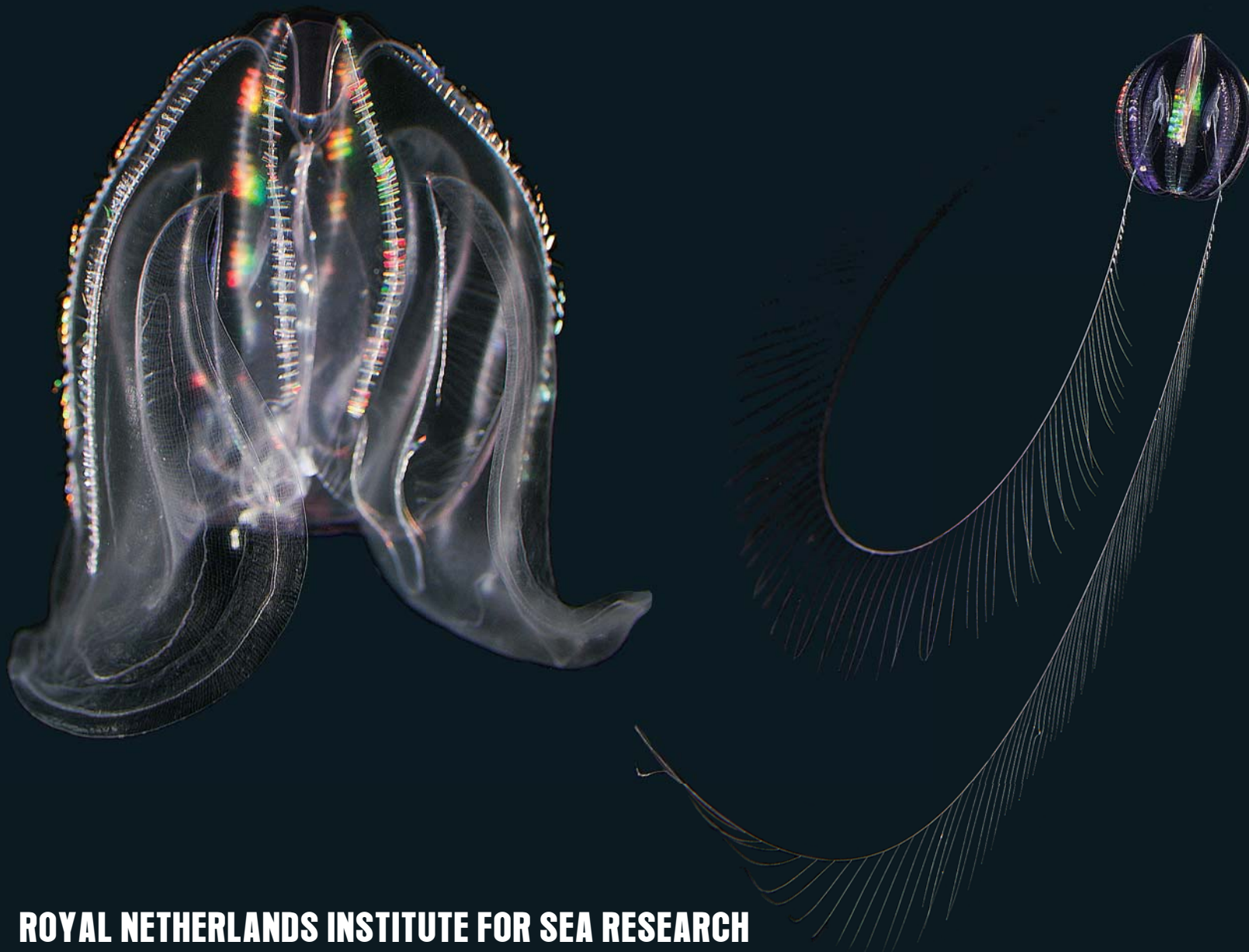


ANNUAL REPORT 2012



ROYAL NETHERLANDS INSTITUTE FOR SEA RESEARCH

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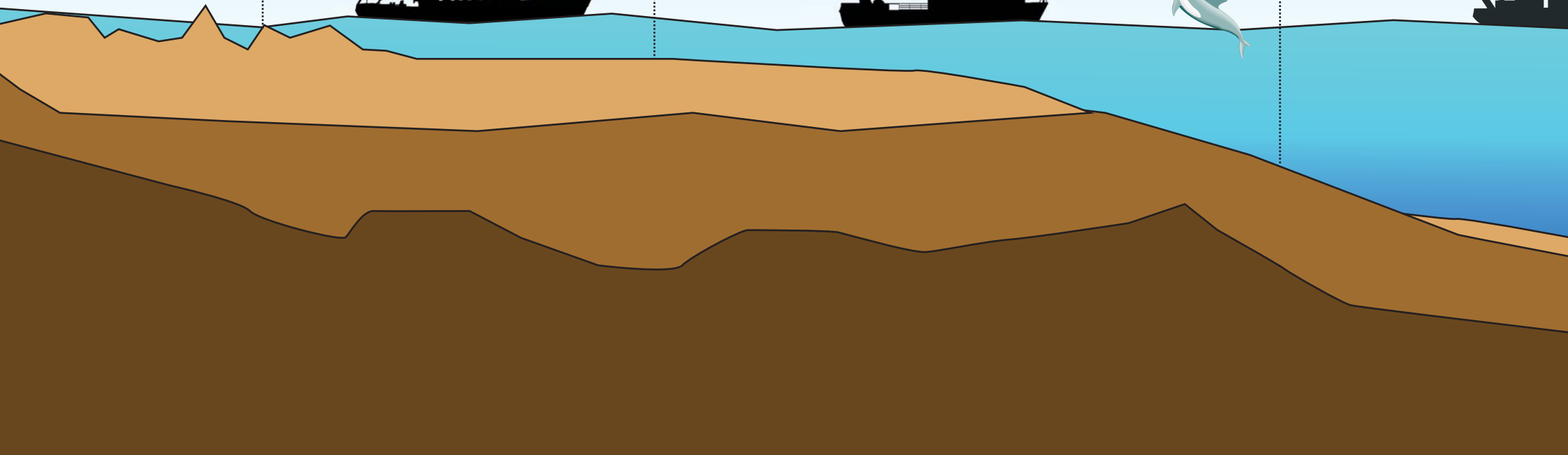
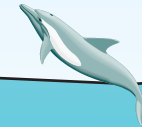


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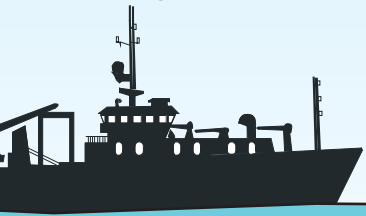


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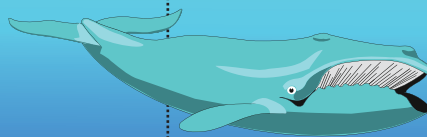


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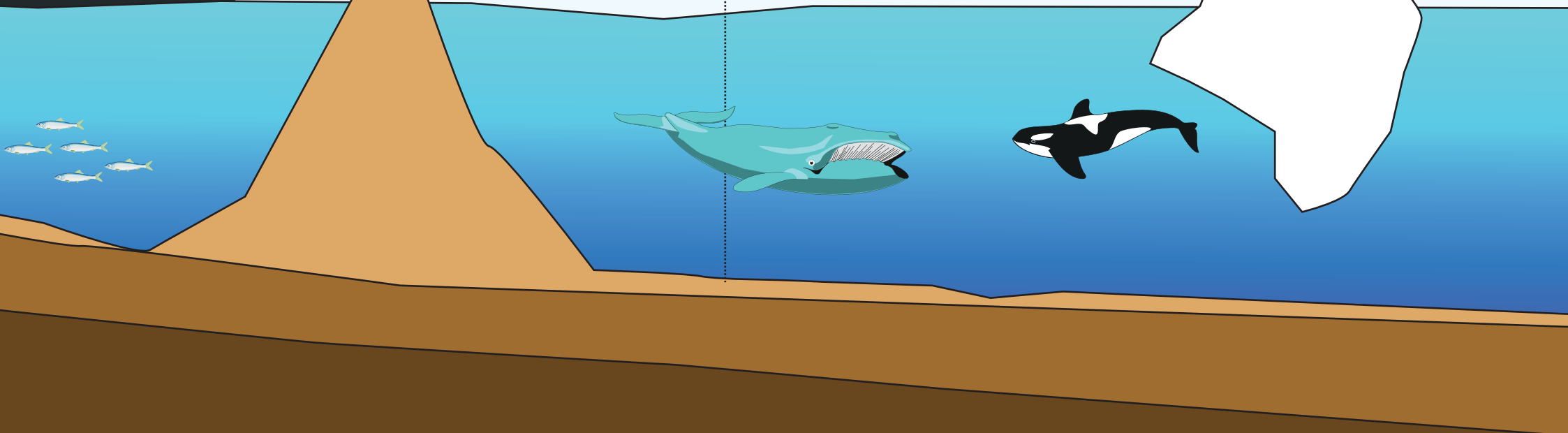
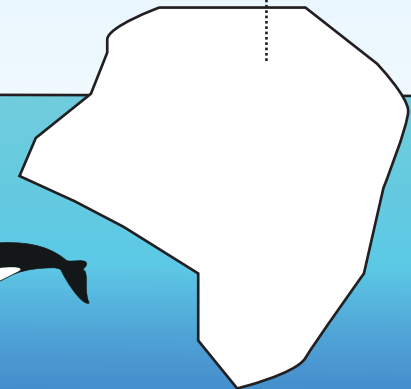
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Introduction



January 1, 2012 represented a milestone in the ~140 years history of the institute, when the former Centre of Estuarine and Marine Ecology (CEME) in Yerseke merged with the Royal Netherlands Institute for Sea Research NIOZ, located on the Island of Texel. The combined institute falls under the umbrella of The Netherlands Organisation for Scientific Research (NWO) constitutes the largest concentration of marine scientists in The Netherlands. The merger was formalized on April 4 by His Royal Highness the Prince of Orange in the presence of representatives of the Royal Netherlands Academy of Arts and Sciences (KNAW), NWO, policy-makers, cooperating universities and institutions and maritime industry. The merger significantly strengthened the role of Royal NIOZ as the national Netherlands oceanographic institute, also in an international perspective.

Gaining fundamental insights in complex and dynamic marine ecosystems and environments is of vital importance for modern society and at the heart of the mission of Royal NIOZ. Our activities, our mission, our multidisciplinary research, including frontier applied studies, and our modern facilities, including ships, are dedicated to this task.

Furthermore, NIOZ supports academic marine research with knowledge and infrastructure in the Netherlands and abroad.

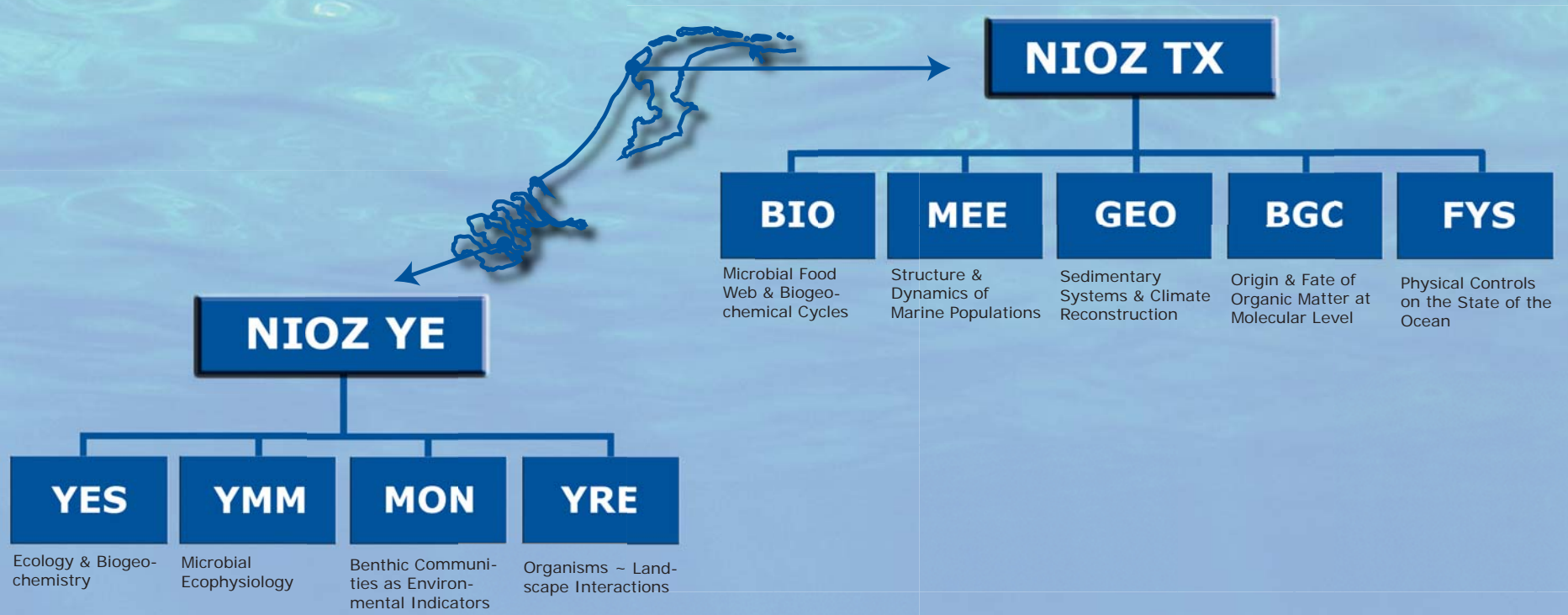
Research at Royal NIOZ focuses on marine environments globally, from estuaries and deltaic settings, from polar regions via temperate zones to tropical coral reefs, and into the depths of the oceans. This annual report presents the 2012 highlights of our activities and results along an in- to offshore context, and is backed up by the vital statistics in the

final pages. More information is available on-line via www.nioz.nl/annual-report-2012

The year 2012 was a year of excellent productivity, growth and change, another very successful and dynamic year for our institute.

Henk Brinkhuis, General Director
Herman Ridderinkhof, Deputy Director





About NIOZ

The Royal Netherlands Institute for Sea Research, NIOZ, is the oceanographic institute of the Netherlands. The mission of NIOZ is to extend and communicate scientific knowledge on seas and oceans for a better understanding and a sustainable use of our planet, to manage the national facilities for sea research, and to support research and education in the Netherlands and abroad.

In 1876, the institute was established as the Zoological Station in Den Helder. It evolved into a multidisciplinary oceanographic institute while addressing marine physics, chemistry and geology from the late 1950's onward. The institute was renamed as 'The Netherlands Institute for Sea Research', and since 1970 it resides at the Frisian island of Texel. On January 1, 2012, NIOZ merged

with the Centre for Estuarine Marine Ecology (NIOO-CEME) in Yerseke. NIOZ now has two locations, one on Texel at the border between the North Sea and the Wadden Sea, and one in Yerseke, situated in the Dutch Delta area.

NIOZ Research is organized in five scientific departments at Texel and four research groups in Yerseke as illustrated in the figure. NIOZ Research is supported by Marine Research Facilities (MRF) and Ship Management & Logistics (SML), managing our fleet of five research vessels and sea going equipment, by Marine Technology (MTec) for constructing and servicing equipment as well as for technical support during cruises, and by the Data Management Group (DMG), responsible for the archiving and accessibility of research data.

A recent development concerns NIOZ Science Harbour, where fundamental science meets green initiatives for the exploitation of the seas. Companies are invited to develop and test new ideas and concepts in an inspiring setting with direct access to scientific expertise and excellent research facilities.

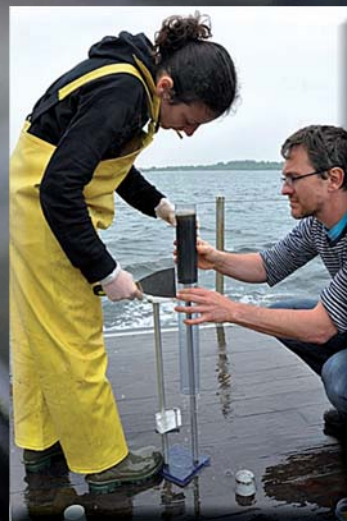
For more information check our website at: www.nioz.nl

DELTA

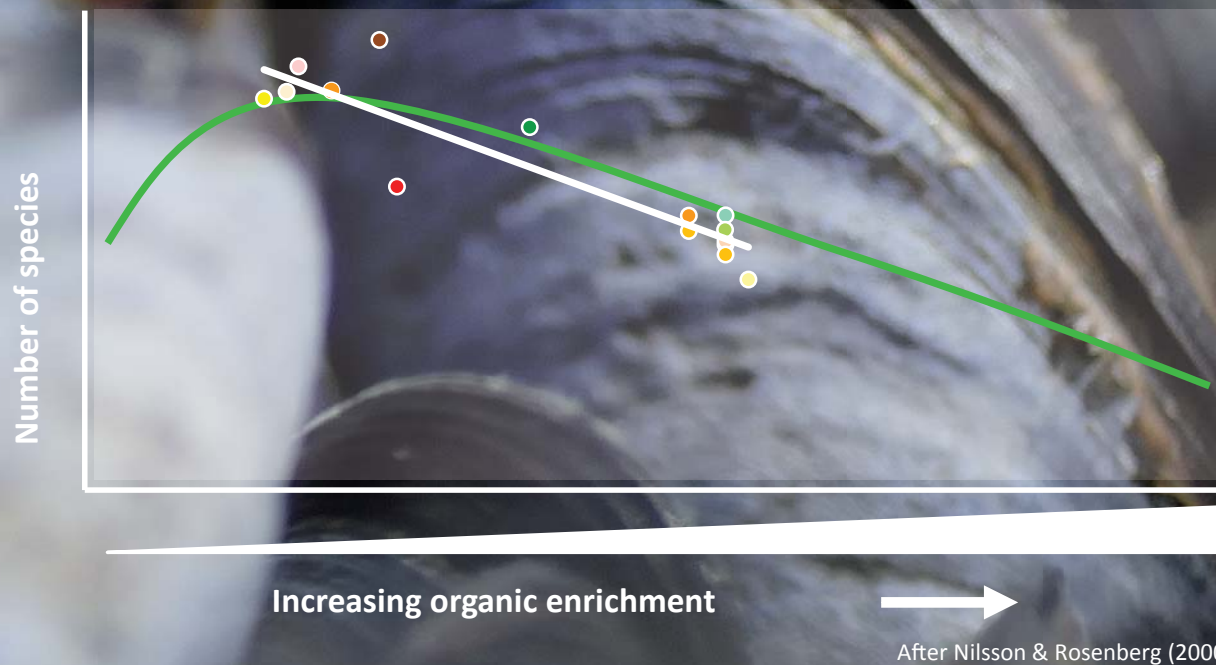
Lake Grevelingen: a model ecosystem in our backyard

Increasing water temperatures and stagnant bottom waters promote oxygen free zones in coastal areas. Lake Grevelingen represents a model system to study the effects on the chemistry of water and sediments.

Lake Grevelingen is a former Meuse-Rhine estuary that turned into Europe's largest non-tidal brackish water lake upon the completion of the Brouwersdam in 1972. Its water quality may deteriorate dramatically during warm summers, when a high oxygen demand and limited mixing of water due to the exclusion of tides result in severe oxygen depletion. Such hypoxic conditions may be detrimental to water tourism and the mariculture of mussels and oysters in Lake Grevelingen, but at the same time it provides an excellent opportunity to study its biogeochemical consequences. In 2012, an intensive field campaign was conducted in collaboration with various national and international partners. The water column and sediment of a single anoxic basin were sampled on a monthly basis with RV Luctor. Experiments and analyses covered a wide range of biogeochemical topics, including benthic metabolism, nitrogen cycling, microbial long distance electron transport, and the thread-forming bacterium *Beggiatoa*.



Enhanced food supply reduces benthic biodiversity



Benthic biodiversity patterns from Greece to Norway show species richness to decrease with higher food supply. The cause for this relationship remains elusive.

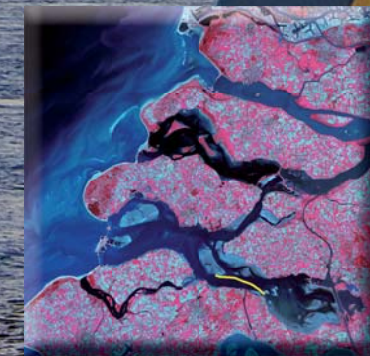
Through the Marine Biodiversity and Ecosystem Functioning (MARBEF)-network, a total of 15 data sets on seafloor biodiversity were made available for statistical analyses. The data covered habitats from Greek to Norwegian waters, encompassing a wide range in food supply to the seafloor. Species richness, the number of benthic species per unit area, was found to be highest in the Irish Sea and the Sea of Crete and showed a minimum in the Dutch Delta. Relating species richness to environmental conditions showed a convincing negative trend with the rate of food supply. This observation accords well with the declining trend of the general hump-shaped relationship between diversity and productivity (see figure). The upward cline presumably reflects food limitation on species richness, but such low rates of food supply are apparently lacking for the habitats investigated here. The immediate cause for the observed declining trend, however, is hard to identify, as an increase in food supply may occur along with other changes in environmental conditions that affect species richness.

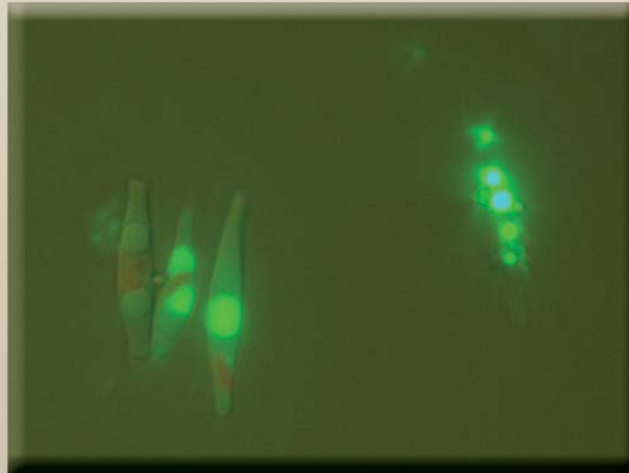
DELTA

Novel tool reveals highly variable chlorophyll contents in estuaries

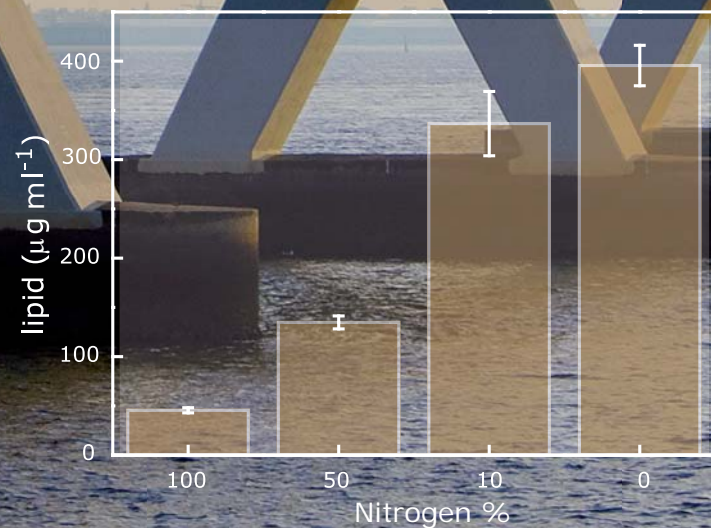
Phytoplankton provide food for the higher trophic levels in marine systems. Novel monitoring tools are developed to understand their distribution in dynamic estuaries.

Estuaries are vital coastal ecosystems of great economic and ecological value, where microscopic algae represent an important food source for the higher trophic levels. In order to understand their distribution we developed (PROTOOL, EU) measuring tools to be applied on ships of opportunity, like ferries. For example, the 'reflectance module' is designed to capture the light reflected by the water column which allows us to quantify phytoplankton abundance. This resembles the technique that is applied in remote sensing by satellites, but now at the ship's level. The Google Earth image shows green bars for the chlorophyll estimates along a transect (yellow line), as obtained from this module for a cruise on the Oosterschelde. The light green bars show the locations of the fixed stations according to standard sampling strategies. Note that continuous monitoring reveals substantial spatial variability in phytoplankton biomass, which may go unnoticed by conventional techniques.





Microscopic algae as future source for biodiesel?



The marine diatom *Phaeodactylum tricorneratum* accumulates unusually large amounts of lipids. Pilot studies should demonstrate economic feasibility to use microalgae for biodiesel production.

Microalgae not only have a higher yield per surface area than macroscopic plants, but many of them can grow in environments that are unsuitable for crops. Moreover, mass cultivation of marine microalgae does not depend on the supply of freshwater, which often limits the production of fresh water algae and crops. We have isolated the marine diatom *Phaeodactylum tricorneratum* and demonstrated that it accumulates unusually large amounts of lipids which even increased while growing the algae under nitrogen limitation (see illustration). This, along with the ability to convert waste products of biodiesel production into lipids as well, renders *Phaeodactylum tricorneratum* an excellent source for biodiesel production. A high biomass and lipid content are the prerequisites to make the harvesting economically feasible. Within the framework of the EU demonstration project InteSusAI, this diatom will eventually be cultivated in bioreactors of up to 10 hectares.

INTERTIDAL

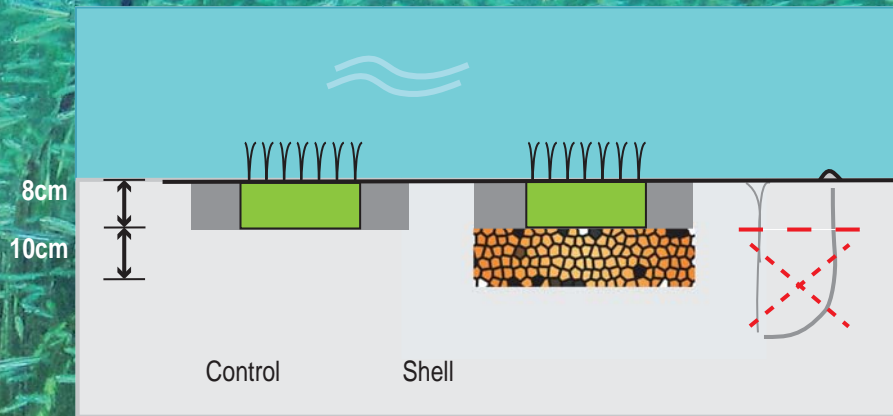
Seagrasses survive toxic sediments thanks to co-occurring clams with symbiotic bacteria





Seagrasses are among the few vascular plants able to root and grow in sulfidic marine sediments. A tripartite cooperation with clams that host symbiotic bacteria allows them to grow in these toxic sediments.

Intertidal sediments receive large quantities of organic debris which is largely decomposed by bacteria producing the highly toxic hydrogen sulfide. Some vascular plants growing in sulfidic sediments release oxygen from the atmosphere via the roots into the sediment in order to detoxify the sulfide by oxidation. However, seagrass has developed a unique tripartite life form to alleviate the lethal sulfide stress. Small clams living in the rooted zones of seagrass host symbiotic bacteria on their gills that are capable of sulfide oxidation for growth. The bacteria are harvested by the clams as a food source whereas the seagrass benefits from the reduction in sulfide stress. It has been demonstrated that seagrass plants grow faster in habitats with such clams than without. If we are to preserve and restore seagrass beds, we clearly need to examine how they cooperate with other organisms as well as studying the plants themselves.



Eliminating biomechanical warfare contributes to restoration success



-  Ambient
-  Reworked
-  Shell layer
-  Seagrass sod

 Exclusion affected sediment in a schematic lugworm burrow



©Marjolijn Christensen

Humans are ecosystem engineers *par excellence*, but the success of their efforts to preserve or restore specific habitats may depend on species interactions.

Ecosystem engineers are species that modify their physical habitat and thereby improve their fitness. Such modifications may prohibit the establishment of other species, a phenomenon known as 'biomechanical warfare'. In a restoration project of the seagrass *Zostera noltii* in the Oosterschelde, we excluded negative interactions between lugworms and seagrass by applying a 10 cm thick shell layer in the sediment, and planting the seagrass on top of this. The layer effectively excluded adult lugworms and significantly reduced the relief caused by the worms. At a sheltered site we observed a significant improvement in seagrass growth, whereas at an exposed site, physical disturbance due to waves was a dominant effect wiping out the consequences of ecological interactions. Shielding restoration species from biomechanical antagonists can contribute to restoration success by helping the planted species to overcome a minimal density threshold above which it can further maintain itself.

INTERTIDAL

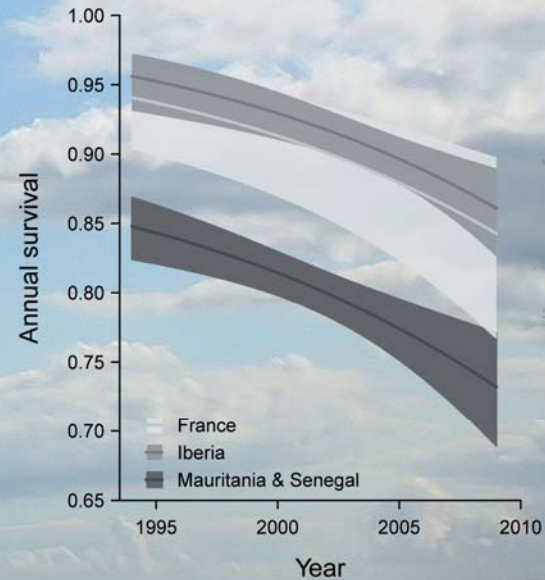
Red knot personalities affect mudflat exploitation on a large scale



Red knots exhibit various personalities which are expressed in their feeding strategies during periods of food shortage.

Animals differ from each other: some are bolder, more aggressive, or more explorative than others. Red knots are shorebirds that depend on the mudflats of the Wadden Sea where they live off buried clams. In an experimental setting, their individual behaviour was studied by quantifying the way they explored five artificial food patches. Some individuals remained at one patch, while others readily explored all patches. Given these results, we re-analysed red knot occurrence in the Dutch Wadden Sea in years of food shortage due to cockle dredging. It is now recognized that 'non-explorative' knots need to deal with food shortages locally, whereas 'explorative' knots, in search of better forage, go to mudflats in, for instance, England and Germany. This versatility presumably increases the resilience of red knot populations in the Dutch Wadden Sea.

Spoonbills habitually migrate further south than is good for them



Do spoonbills choose the best places to spend the winter? An analysis of their survival and winter site choice suggests they do not.

Spoonbills that breed in the Netherlands winter along the Atlantic coast between France in the north and Senegal in the south. Year-round observations of more than 2000 adult spoonbills that were ringed as nestlings from 1988 to 2010 revealed that birds that spend the winter in Europe have a higher survival rate than birds that fly to their 'traditional' wintering grounds in West Africa. Despite this, a significant number of spoonbills keep making the journey each autumn all the way to Africa. Spoonbills thereby demonstrate that habitual behaviour can be a major limitation when it comes to making the necessary adaptations to a changing climate or habitat.

COASTAL

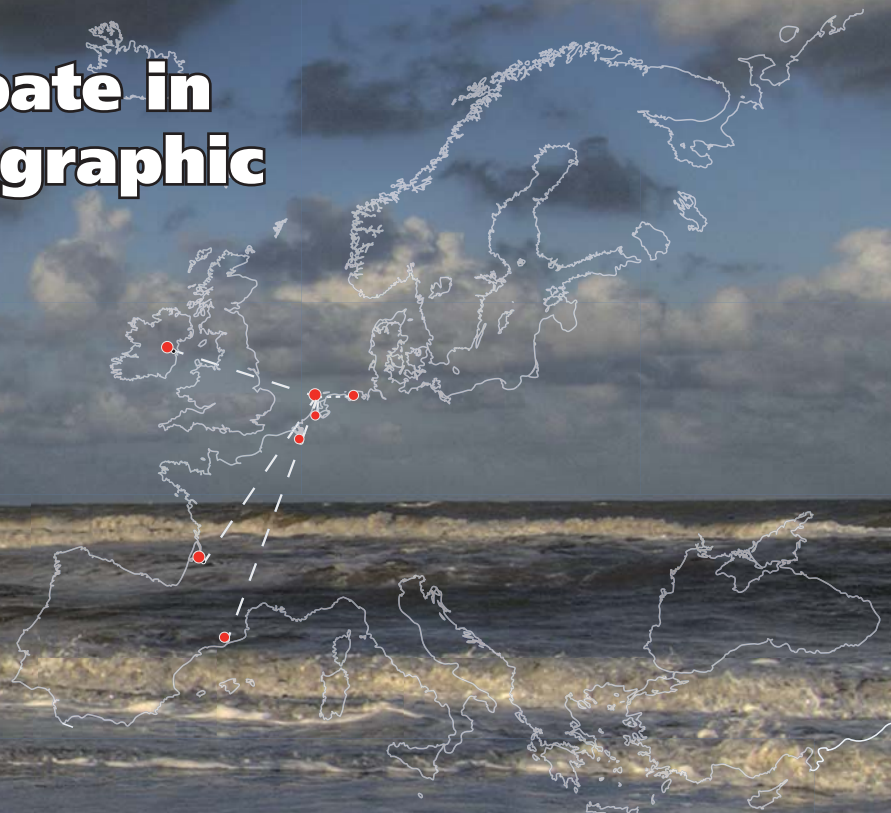
Internal waves near Texel-beach

A summer bather entering a calm sea from the beach may sense alternating warm and cold water. Surprisingly, these variations seem to be caused by internal waves.

On a calm summer day, an array of high precision sensors has measured fast changes in water temperature of up to 1°C near a Texel beach. The measurements show that sensed variations are in fact internal waves, supported in part by vertically stable stratification in temperature, hence in density. Such motions are common in the deep ocean, but generally not in shallow seas where mixing is expected strong enough to homogenize. The internal beach waves have amplitudes ten times larger than those of the small surface wind waves. Their mixing rates are larger than for internal waves found in open ocean but smaller than wave breaking above deep sloping topography. Results not only improved our knowledge on the redistribution of material in seas and ocean, we also learned that humans can sense differences of 1°C in waters of 18°C .



Citizens participate in collecting oceanographic data



The colour of natural waters provides invaluable information on their composition. CiTCLOPS aims at developing low-cost solutions to collect coastal and oceanic data. Currently, colour determinations for quality assessment of natural waters are largely based on spectral measurements at sea and from space. A simpler approach involves the almost forgotten Forel-Ule colour comparator scale. It has been applied since the 19th century and provides a methodological connection to historical ocean colour data series which are used as a baseline for recent climate change. The CiTCLOPS consortium will design an extended, rugged, and low-cost scale to be used by the general public. A second development concerns the design and construction of low-cost water quality sensors and methods to establish water clarity and natural fluorescence. Applications (App's) for smartphones will be developed to monitor these water quality parameters. This EC-funded project (3 years) to establish a Citizens' Observatory for Coast and Ocean Optical Monitoring, is carried out by a consortium from academia, technology centres, industry and end-user organisations based in five EU countries.

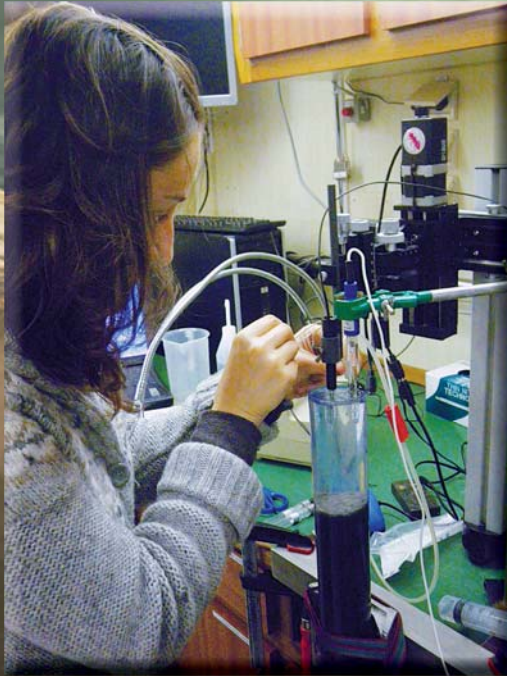
COASTAL

Climate warming limits oxygen supply to Baltic bottom waters

The surface water temperature of the Baltic has increased by 2°C since the Little Ice Age. The spreading of oxygen free bottom waters in the Baltic may be a scenario of future climate warming. Climate change has a strong impact on ecosystem health, particularly in marginal seas such as the Baltic, for example causing the spreading of oxygen-free areas, the so-called dead zones. An integrated study of the sedimentary record (past 1,000 years) by NIOZ, German and Scandinavian scientists provided new insights into the functioning of the Baltic Sea ecosystem under natural and human-influenced climatic changes. Between the Little Ice Age (AD 1550-1850) and the Modern Warm Period the surface water temperatures, reconstructed using TEX₈₆ as a molecular 'palaeo-thermometer', increased by ~2°C. Simultaneously, the anoxic areas in the Baltic Sea began to expand significantly as evident from the accumulation of laminated sediments. These results provide evidence that changes in surface temperature strongly influence deep water oxygenation, and highlight the risk of a continued spreading of anoxic areas during climate warming in the future.



Marine sediments operate as natural batteries



The nano-wiring of sediments by chains of bacteria may speed up chemical reactions and provides new views on the biogeochemical functioning of bacterial communities and sediments.

In 2010, laboratory experiments by Danish researchers revealed that filamentous bacteria are capable of transferring electrons over centimeter-scale distances in marine sediments. By generating electrical currents, these intriguing bacteria make marine sediments operate as a natural battery. In 2012, we have demonstrated that this remarkable phenomenon not only occurs in the lab, but also in natural sediments. In Dutch coastal waters, we have discovered various habitats where long-distance electron transport occurs, such as subtidal sediments, salt marshes and seasonally hypoxic basins. Our results show that the process strongly impacts the sedimentary oxygen uptake and sulphur cycling at these sites, showing that long-distance electron transport could have profound implications for the mineral cycling and ecosystem functioning of the seafloor. On the applied side, this process may potentially lead to novel bio-electrical applications, such as improved electricity generation in microbial fuel cells, or even to new conductor materials applied in bio-electronics.

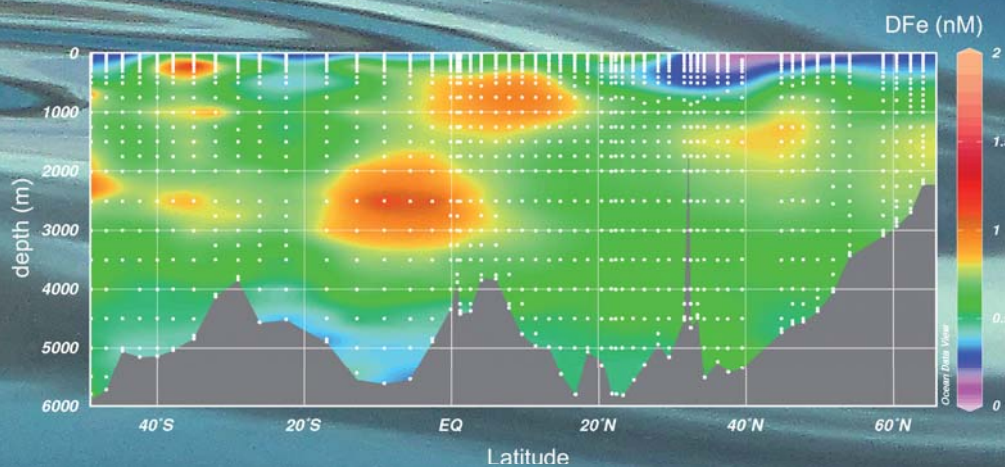
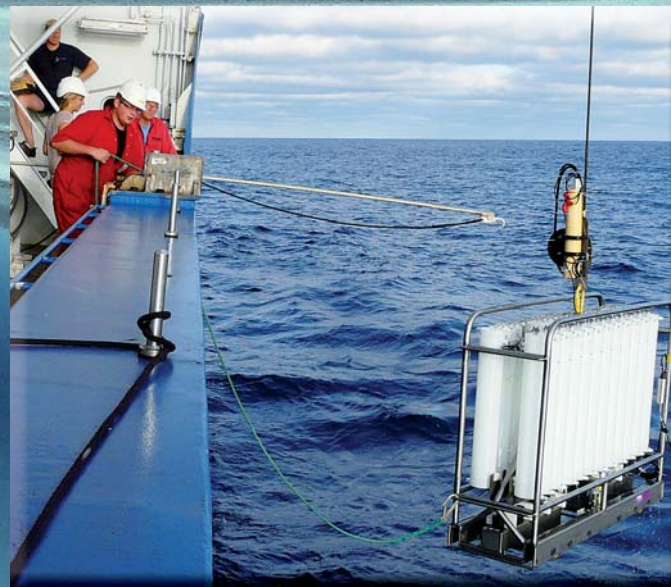
OPEN OCEAN

Pelagia supports international Red Sea project

NIOZ' flag ship RV Pelagia with crew and technicians supported a research project between Germany and Saudi Arabia on the geology and biology of the Red Sea. In April and May RV Pelagia sailed to the Red Sea for a 63-days charter within the framework of the "Jeddah Transect Project", a scientific collaboration between GEOMAR (Kiel, Germany) and the King Abdulaziz University (Jeddah, Saudi Arabia). Four projects participated in two multidisciplinary cruise legs. The first leg concentrated on the geology, microbiology and geophysics of the central Red Sea Rift zone, whereas the second leg focused mainly on biology. Aided by GEOMAR's submarine JAGO, special attention was given to food web structures, corals and macro algae. Between the cruise legs in Jeddah harbour, a two-day VIP event was organized on board RV Pelagia, attended by GEOMAR director P. Herzig and the president of the Helmholtz Association J. Mlynek. On that occasion, many locals visited the ship and the Pelagia crew was in turn invited to the gala dinner that celebrated the end of the project.



On a voyage of discovery: unravelling the role of trace metals in the biological cycle



A 17,500 km long sampling transect in the West Atlantic reveals a wealth of information on the bio-availability of trace nutrients and their sources.

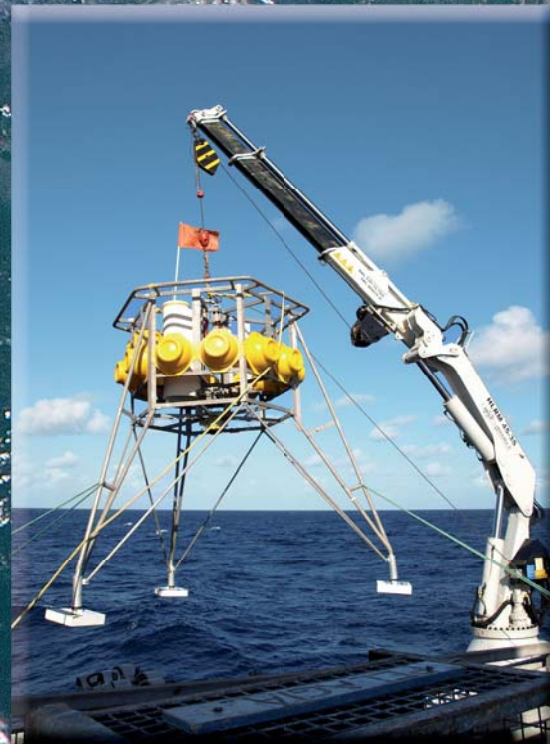
Each organism needs six trace elements for growth: iron, zinc, manganese, cobalt, nickel and copper. In the open oceans these trace metals occur in extremely low abundances. Plankton ecosystems in large parts of the oceans likely are limited by the availability of one of these bio-essential trace nutrients. The NIOZ is at the forefront of the international GEOTRACES program to discover and map for the first time the large scale distribution of these trace metals. Engineers of NIOZ designed a revolutionary new titanium sampling system with 24 samplers of ultraclean PVDF plastic. The longest-ever (17500 km) full-depth (4-6 km) open ocean vertical section was sampled in the West Atlantic Ocean from Iceland to the Falklands. The resulting database is unprecedented with more than 1300 data values for each of many trace metal elements. Iron has multiple sources like dust from the Sahara, hydrothermal vents, mineralization in oxygen minimum zones, and the Amazon River. Zinc shows close covariance with major nutrient silicon.

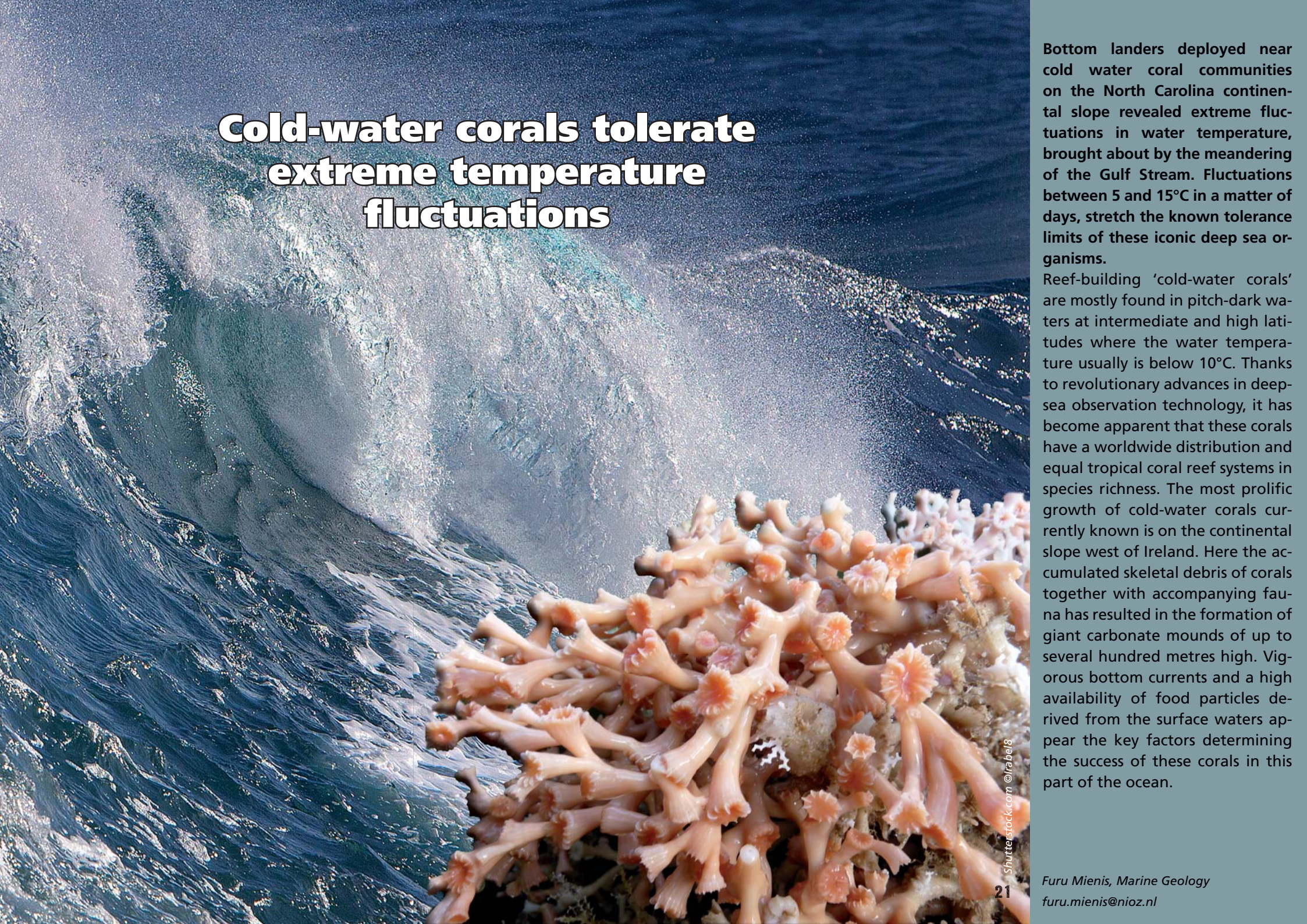
OPEN OCEAN

Internal tides drive up-slope sediment transport

Oscillating currents in Whittard Canyon were demonstrated to result in net up-slope transport of suspended particulate matter. This observation urges for a more diversified view on sediment transport in submarine canyons.

Submarine canyons are commonly viewed as conduits for merely down-slope transport of particles from the shelf to the deep sea. This view is challenged by observations made with bottom landers in Whittard Canyon, a large branching submarine canyon system incised in the shelf edge and slope of the northern Bay of Biscay. In its upper reaches, oscillating tidal currents with peak velocities in excess of 50 cm s^{-1} transport suspended particulate matter alternately up- and down-slope, with a conspicuous up-slope tendency. The up-slope transport is counteracted, however, by intermittent down-slope mass transport as sediment gravity flows, the submarine equivalent of avalanches. These gravity flows periodically fuel deep-sea benthic ecosystems with relatively fresh food. The study of Whittard Canyon was carried out in the framework of the European integrated HERMIONE project (2009-2012), in which 50 research institutes participated.





Cold-water corals tolerate extreme temperature fluctuations

Bottom landers deployed near cold water coral communities on the North Carolina continental slope revealed extreme fluctuations in water temperature, brought about by the meandering of the Gulf Stream. Fluctuations between 5 and 15°C in a matter of days, stretch the known tolerance limits of these iconic deep sea organisms.

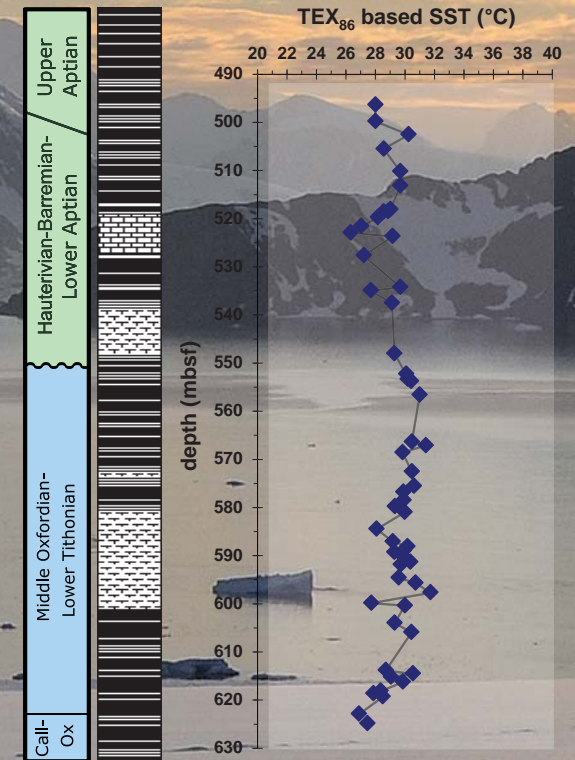
Reef-building 'cold-water corals' are mostly found in pitch-dark waters at intermediate and high latitudes where the water temperature usually is below 10°C. Thanks to revolutionary advances in deep-sea observation technology, it has become apparent that these corals have a worldwide distribution and equal tropical coral reef systems in species richness. The most prolific growth of cold-water corals currently known is on the continental slope west of Ireland. Here the accumulated skeletal debris of corals together with accompanying fauna has resulted in the formation of giant carbonate mounds of up to several hundred metres high. Vigorous bottom currents and a high availability of food particles derived from the surface waters appear the key factors determining the success of these corals in this part of the ocean.

POLAR

Subtropical conditions for Antarctic coast and Southern Ocean in ancient greenhouse world

Over the past 150 million years, the Earth has frequently experienced a much warmer climate than today. New techniques developed at NIOZ enable an accurate reconstruction of paleoclimate temperatures.

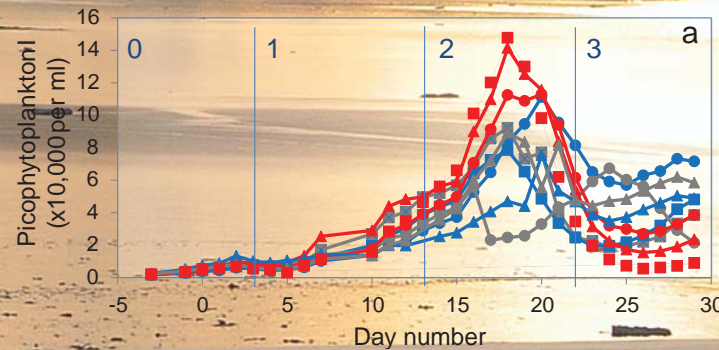
The technique used to reconstruct ancient temperatures is based on the chemical structure of fossil bacterial membrane lipids and is therefore called 'molecular palaeothermometry'. It has been applied to a 1000 m long ocean sediment core from East Antarctica to reconstruct Antarctic temperatures during the Eocene (ca. 55 – 48 million years ago), a warm period with atmospheric carbon dioxide levels four to five times higher than at present. Molecular palaeothermometry revealed summer temperatures of over 25°C and extremely mild winters. This scenario is well in line with the pollen and spore analyses by researchers from the Universities of Utrecht and Frankfurt, which suggest that the prevailing climate supported growth of subtropical forests along the Antarctic coastline. Similarly it was demonstrated, in collaboration with researchers from the University of Oxford, that the Southern Ocean experienced subtropical temperatures around 140 million years ago.



Tiny algae dominate the phytoplankton community at high CO₂ levels

Acidification of the Arctic Ocean promotes a shift towards smaller microalgae. This change may reduce the efficiency of the biological pump.

Approximately half of the CO₂ released by the burning of fossil fuel is absorbed by the oceans. The resulting acidification of the ocean may strongly impact the community composition of microalgae which form the basis of the ocean food web. The Arctic Ocean is particularly sensitive to acidification due to the high solubility of CO₂ and low carbonate saturation state of its cold surface waters. In Kongsfjorden (Spitsbergen), we studied the consequences of ocean acidification on the natural Arctic community of algae and microorganisms. Large enclosures were manipulated by imposing a range of CO₂ pressures and the community composition was monitored for a period of one month. Particularly, the growth of algae smaller than three micrometer in diameter was stimulated at higher CO₂ levels. These small algae are intensively grazed and appeared prone to viral lysis, which dramatically affect the structure and functioning of the Arctic food web, and reduces the biological draw-down of atmospheric CO₂ into deeper waters.

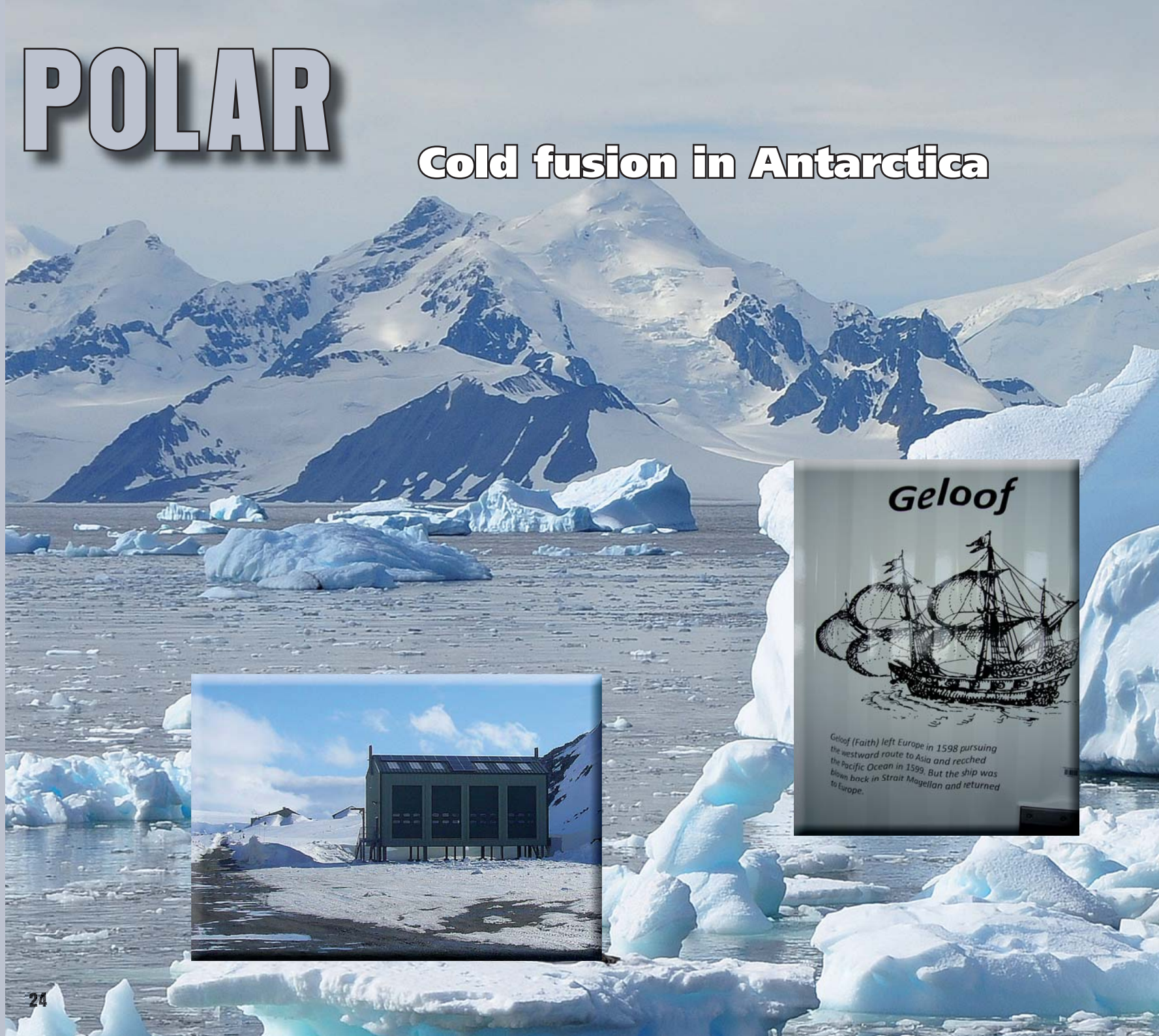


POLAR

Cold fusion in Antarctica

The Netherlands Organization for Scientific Research (NWO) launched a joint research program with the British Antarctic Survey. Two out of five projects are supervised by NIOZ scientists.

West Antarctica is rapidly warming. Glaciers melt faster causing extra sea-level rise, a concern for The Netherlands. Some once permanent ice fields at sea have disappeared and there is less annual winter sea ice. The frozen paradise still is a habitat for microscopic algae in the sea, krill, penguins, whales and for top predators like the leopard seal and orca. Yet, warming seawater, less ice, more meltwater, affect the algae that are the base of the foodweb. NWO has launched a joint program with the British Antarctic Survey (BAS). Joint enthusiasm of BAS, NWO and NIOZ was pivotal for the initiative and for the design, realization and names of the new Dirk Gerritsz Laboratory and its four mobile laboratories Annunciation, Faith (Geloof), Hope (Hoop), and Love (Liefde). Two of the five projects are by NIOZ scientists. Johann Bown, Patrick Laan and Hein de Baar measure dissolved iron in the sea, because iron is essential for growth of the algae. Tristan Biggs and Corina Brussaard study the foodweb interactions between the algae, viruses and microzooplankton.



Geloof (Faith) left Europe in 1598 pursuing the westward route to Asia and reached the Pacific Ocean in 1599. But the ship was blown back in Strait Magellan and returned to Europe.

Without a trace.....



The mobile Dirck Gerritsz Laboratory has been set up at Rothera station to accommodate Dutch polar research. Dedicated gear has been developed by NIOZ workshops to complement the Antarctic research facilities.

Two Antarctic research projects by NIOZ focus on the nutrition and growth of microorganisms, requiring ultraclean procedures for sampling this pristine habitat. NIOZ' workshops have constructed equipment to support these studies. For collecting water samples down to a maximum depth of 650 m, a battery powered winch was designed to be operated from a Zodiac. It is made of titanium and furnished with a Kevlar cable. The actual sampling is done with a scaled-down version of the ultraclean NIOZ PRISTINE watersampler. This five liter sampler can be clamped to the cable and closed with a messenger weight running down the cable. This combination of proven techniques with a newly developed hydraulically actuated valve resulted in a highly reliable sampling device even under polar conditions. The choice of materials warrants ultra-clean procedures with a minimal risk of contaminating water samples for trace metal analyses.

© Corina Brussaard NIOZ TX

Interview



Gert-Jan Reichart

Climate Research Using the Past

The past may help to gain insight into climate changes in the present. This is one of the primary aims of biogeology. Dr Gert-Jan Reichart, head of the department of Marine Geology since September 2012, believes that NIOZ can make a significant contribution to climate research. 'We have the expertise and good facilities. Our workshops can build all sorts of equipment and we have our own fleet of research vessels. This is the power of NIOZ, top-notch'.

Single-celled organisms building calcareous skeletons, similar to mussels and oysters, abound in the oceans; these might well hold the key to understanding climate change. Their calcareous skeletons have been preserved in the sediment on the sea floor ever since these organisms existed. Analysis of their remains, retrieved from sediment layers, may provide clues about the history of our climate. 'The calcareous skeleton is formed by

calcium, oxygen and carbon. Their stable isotope composition varies depending on the circumstances under which the skeletons were formed. By measuring the stable isotopes we may find answers to questions such as what was the climate like when the organisms lived and what was the salinity of the sea water? Combining all data on past climate conditions may help to explain what is presently happening to our climate.'

'Crucial knowledge', says Reichart. 'The current rise in global temperature is worrying, but it may turn out a lot worse than we think now. The rise is likely to be slowed down by the gradual melting of the ice caps. But we don't know how long this is going to continue. We know a lot, but not everything.'

Starting off as a welder, Reichart switched to working as a scientist for Utrecht University and the Alfred Wegener Institute in Germany. At NIOZ,

he is involved in attracting new, and supervising extant staff. 'I've more time to do research now. At university, one is also involved in teaching. I like doing the chemical analyses myself, and I want to see all data for interpretation. I am really on the ball, which I have to be, I think.'

Risks and Benefits of Saharan Dust



Jan-Berend Stuut

Seven hundred to nine hundred million tons of Saharan dust is blown into and across the Atlantic Ocean annually. This may cause damage to, for example, corals or cause respiratory problems among the Caribbean population. Moreover, the outbreak of foot-and-mouth disease in the UK in 2001 may well have been caused by germs, carried by dust over thousands of kilometres.

The wind-blown dust, however, may also have positive effects. Nutrients in Saharan dust may stimulate the growth of algae, which takes CO_2 from the atmosphere and produces oxygen. The sinking of dead algae out of the upper ocean removes the CO_2 from the atmosphere for a prolonged period of time. 'That's the hypothesis at any rate', says Jan-Berend Stuut, who was awarded a 2-million-euro grant by the EU last year to study this phenomenon.

The idea for this project, which is partially funded by NWO (Netherlands Organisation for

Scientific Research), was conceived during the re-enactment of the Beagle journey in 2010. On board, Stuut engaged in a discussion with a geo-engineer who proposed reducing the greenhouse effect by adding large amounts of iron dust to the sea. The reality, however, is more complex. 'After the eruption of an Icelandic volcano in 2010 along with the volcanic ash a large amount of iron was deposited in the sea. The boost of algae growth, however, was short-lived because of a nitrate shortage. It's like in agriculture, where farmers alternately apply lime and fertilizers to prevent mineral shortages. Together, these create fertile soil. I imagine that this works in about the same way in the ocean.'

Stuut's research project started in October 2012 and will continue for five years. Devices for collecting desert dust from the atmosphere and from the seawater have been moored to the seabed in the Atlantic Ocean on five sites between



Africa and the Caribbean. Data from these devices in combination with satellite images will be used to record variability in dust transport and settling throughout the year.

In addition to the project leader, a technician, two PhD students and a postdoc, each contributing their own expertise, are involved in this project. As a geologist, Stuut is also interested in the history of the desert dust: '10,000 years ago, the Sahara was a savannah with trees. But during the last ice age 20,000 years ago, the area was even more barren than it is today, and lots of desert dust ended up in the ocean. The layers of sediment that accumulated on the ocean floor in the course of history thus represent a kind of climate archive. In sediment cores retrieved from the seabed, we can try to interpret these layers. This is interesting because we may very well know when the ice ages occurred but we still know very little about the climate of Africa at the time'.

Interview



Peter Herman

Regional Projects and International Relevance

The merger of NIOZ on Texel and the Centre for Estuarine and Marine Ecology (CEME) in Yerseke on 1 January 2012 consolidated the position of the two most important Dutch institutes in the field of coastal and sea research. Well over a year after the actual merger, the participants are satisfied. Prof. Peter Herman, director of the Yerseke division says: 'Of course adapting to an existing organization and to its procedures and customs can be difficult at times, but overall it was OK. Collaboration with Texel has many positive aspects'.

One of the first projects where scientists from Texel and Yerseke are working together involves research into the consequences of oxygen depletion on benthic life in the former Grevelingen estuary in Zeeland. Since NIOZ and Yerseke have merged, physicists and the lander group from Texel are also involved. Using their measuring de-

vices, we can achieve more than we could on our own.

The availability of devices that are developed in the Texel workshop is a great advantage of the merger, says Herman. 'We used to buy the standard equipment; now we have something unique. And we've something to offer as well. Equipment that we use for measuring mudflat formation in Zeeland can also be used for research into subsidence in the Wadden Sea'.

Despite all the positive experiences, Herman also has his worries, especially about the future of fundamental research. 'We have to seize every opportunity to survive. We have to join forces to secure our position within the *Topsectoren*. And it's increasingly important that we join in with regional projects. We've taken up the role of scientific advisors on the deepening of the

river Schelde, and we're also involved in projects in the Grevelingen estuary and Oosterschelde. At the same time, we must guard the international relevance of our work, to ensure our participation in European projects. We don't want to be seen as some small, regional institute either, or even worse, as a kind of consultancy'. Laughing, he adds, 'we're too expensive for that'.

All this affects Herman's own activities; apart from being a division manager, he is also a professor and the head of the department of Spatial Ecology. 'I'm more often on the go and I have to attend meetings more frequently. It's at the expense of other tasks, but that's the way it is. However, I do want to stay involved in scientific research. That's my basic motivation and I don't want to become estranged from it.'

Cold-Water Corals: Unique and Vulnerable

Dick van Oevelen

At depths of 300 to 800 metres below the ocean surface, reefs can be found that have been formed by cold-water corals. To the best of knowledge, the highest coral reef densities are found off the coasts of Ireland and Norway, but reefs have also been observed in the Bay of Biscay, the Mediterranean Sea and along the west coast of Africa. As sunlight does not penetrate to depths where these corals live, they cannot produce food themselves. Awareness of their vulnerability has led to measures directed at their conservation, says Dick van Oevelen from the department of Ecosystem Studies at NIOZ.

Van Oevelen talks passionately about his research that involves collaboration with scientists from various disciplines. As an ecologist, he shares his interest in the secrets of the cold-water corals with geologists. 'These organisms are very special. They feed on dead algae that sink to the

seabed, using tentacles to gather their food. Another interesting aspect of the coral reefs is that they abound with other life forms. It is the corals that mainly build the reef, but they are part of a diverse community of soft corals, sponges and worms, each with their specific role in maintaining the reef. Some worms, for example, produce parchment-like tubes, which are subsequently enveloped by a calcareous layer produced by the corals. This form of collaboration contributes to the strength of the reef.'

Some carbonate mounds formed by cold-water corals are as old as 2.5 million years. Underwater robots and other modern - and expensive - equipment enabled scientists during the last two decades to study the reefs in more detail. We have learnt a lot over the past years, but many questions still remain unanswered. It is not clear yet, for example, how many cold-water reefs exist

worldwide. 'We don't know how many reefs have disappeared either, but probably a lot. Trawling by fishermen has about the same effect on reefs as clearcutting has on a forest: everything is taken down. A dead reef can recover but that may take decades due to the very slow growth of the corals in the cold environment where they live. Much of the reef in the Bay of Biscay has probably disappeared. What is left, is found in areas inaccessible to trawlers. That is telling in itself.'

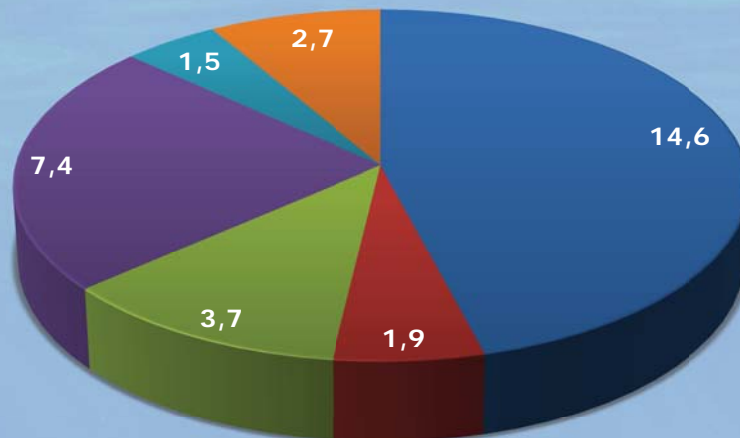
However, there is still some hope. 'Trawling is no longer allowed in areas with reefs. Restrictions have also been imposed on the oil industries. Companies are obliged to do research before they can start working in a particular area. In this way, cold-water corals may force us to revise our views on the deep sea.'



Facts & Figures

Budget

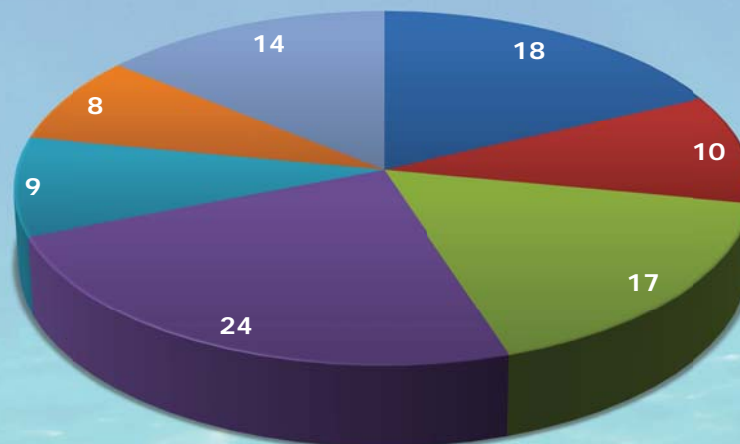
The overall budget for 2012 amounted to 31.8 M€. NWO contributed by 14.6 M€ as structural funding and by 1.9 M€ as a one-off subsidy. Additional funding, totaling 11.1 M€, was received through national (3.7 M€) and international (7.4 M€) project acquisitions. Chartering RV Pelagia to third parties yielded a net revenue of 1.5 M€. Miscellaneous and *ad hoc* funding, mostly related to the merger with NIOO-CEME, amounted to 2.7 M€. A detailed budget overview is presented on-line at www.nioz.nl/annual-report-2012



- Structural funding NWO
- One-off contribution 2012
- Project acquisition NWO
- Project acquisition otherwise
- Charters
- Miscellaneous

Personnel

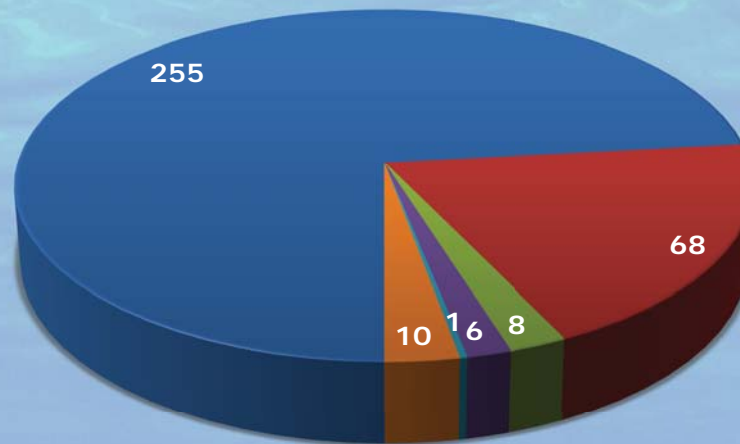
Per 31 December, NIOZ employed 353 staff, equivalent to 318.5 fte's. The international profile of NIOZ is underscored by the substantial number of employees from outside the Netherlands: 89 from over 20 different nationalities. The relative distribution over various staff categories (see the pie diagram) has been fairly constant over the past years. Administration, Ship Crews and Technical staff accounted for approximately 30% of the population, while scientific staff, including tenured scientists, PhDs, postdocs tenured and non-tenured laboratory technicians, accounted for roughly 70%. For more information (in Dutch) see www.nioz.nl/annual-report-2012



- PhD
- Postdoc
- Tenured scientists
- Scientific support
- Technical staff
- Ship crews
- Services & Administration

Output & Outreach

NIOZ scientists have authored 255 peer reviewed publications, ten of which in journals with an impact factor over ten. Eight PhD's successfully defended their thesis and received their doctorate; three at the University of Groningen, one at VU University Amsterdam, and four at Utrecht University. Moreover, a complete book, six contributing book chapters as well as 68 non-refereed publications and ten NIOZ reports have been written. More than 280 orals and 120 posters have been presented at symposia or workshops and the weekly NIOZ colloquium series covered close to 40 lectures. Over 50 public outreach activities such as public lectures, radio/television or newspaper interviews were organised by individual scientists. For a detailed overview of NIOZ output and outreach, see www.nioz.nl/annual-report-2012



- Peer reviewed publications
- Non-refereed publications
- Dissertations
- Book chapters
- Monographs
- NIOZ reports

Marine Research Facilities (MRF)

The NIOZ research vessel Pelagia sailed for 223 operational days in ten cruises, three of which as charter cruises with third parties, and seven within the National Programme for Sea Research (ZKO: Zee- en Kustonderzoek), EU/ESF or NIOZ programmes. RV Luctor sailed for 147 days in five research projects, mainly on the river Schelde, Oosterschelde and Grevelingen. RV Navicula sailed for 170 days in ten research projects, five student courses, and a charter cruise along the North Sea coast for IMARES. More information on NIOZ' research vessels and cruises can be found at www.nioz.nl/cruises



RV Pelagia



RV Luctor



RV Navicula

NIOZ Royal Netherlands Institute for Sea Research, situated on Texel and in Yerseke, is an institute of the Netherlands Organisation for Scientific Research (NWO).

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The annual report can be ordered free of charge, by preference on an exchange base, from the library of NIOZ Royal Netherlands Institute for Sea Research. It is also available at the NIOZ website www.nioz.nl/annual-report-2012

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The mission of NIOZ is to gain and communicate scientific knowledge on seas and oceans for a better understanding and sustainable use of our planet, to manage the national facilities for sea research and to support research and education in the Netherlands and in Europe.

Dissertations

1. De Corte, D. Interaction between viruses and prokaryotes in the sea. Groningen University, 153 pp.
2. Grove, C.A. Madagascar's climate history unlocked by giant corals. VU University Amsterdam, 217 pp.
3. de Kluijver, A. Carbon flows in natural plankton communities in the Anthropocene. Utrecht University, 156 pp.
4. Klunder, M.B. Distribution and sources of dissolved iron in the polar oceans. University of Groningen, 296 pp.
5. Lopes dos Santos, R.A. Reconstruction of late Quaternary marine and terrestrial environmental conditions of Northwest Africa and Southeast Australia: A multiple organic proxy study using marine sediments. Utrecht University, 146 p.
6. Pozzato, L. Prokaryotic, protozoan and metazoan processing of organic matter in sediments: a tracer approach. Utrecht University, 154 pp.
7. Rush, D.J. Ladderanes as tracers of present and past anaerobic ammonium oxidation. Utrecht University, 133 p.
8. Santos, S. Patterns of distribution, dynamics and genetic variation in the peppery furrow shell *Scrobicularia plana*. University of Groningen, 161 pp.

Refereed Publications 2012

1. Adrián -Martinez, S., Ageron, M.,....., van Haren, H., ... , Zuniga, J. The positioning system of the ANTARES Neutrino Telescope. *Journal of Instrumentation* 7 T08002
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2. Adrián -Martinez, S., Aguilar, J.,, van Haren, H.,, Zuniga, J. Search for relativistic magnetic monopoles with the ANTARES neutrino telescope. *Astroparticle Physics* 35, 634-640.
3. Adrián -Martinez, S., Al Samarai, I.,, van Haren, H.,, Zuniga, J. Measurement of the group velocity of light in sea water at the ANTARES site. *Astroparticle Physics* 35, 552-557.
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Relationship with Environmental Conditions and Microbial Community Composition. *Limnology and Oceanography* 57, 959-973.

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55. van der Hout, C., Gerkema, T., Nauw, J., Ridderinkhof, H. Observations of suspended matter along the Dutch coast NCK-days 2012: Crossing borders in coastal research : jubilee conference proceedings, Kranenburg, W., Horstman, E., Wijnberg, K. (Eds.), 213-217.

56. van der Laan, T., Cleveringa, J., De Mesel, I., Depreiter, D., Maris, T., Wijnhoven, S. Nota dataverwerking en databehoeftte T2009 Rapportage Schelde estuarium, Rapportage in het kader van de T2009 Schelde estuarium (Samenwerking ARCADIS, IMDC, UA, NIOZ en IMARES in opdracht van VNSC en RWS-Zeeland), p. 1-55.
57. Vermeersen, L.L.A. Onderwatergolven in ijsmanen, Nederlands Tijdschrift voor Natuurkunde 78(11), 408-411.
58. Wilmott, V., Azzolini, R., Brandt, A., Brinkhuis, H., and 7 others. Scientific Research in Polar Seas – ERICON Science Perspective 2015-2020. EC commission FP7 report , ERAC 211796, 107p, ISBN: 978-2-918428-82-4
59. Wijnhoven, S. Voorstel MEP_GEP habitat oppervlaktes Evaluatie Methodiek Westerschelde. Resultaten aanvullende opdracht T2009 Schelde-estuarium.
60. Wijnhoven, S., Escaravage, V., Blok, D., Dekker, A., Scott, T. Proef zandsuppletie Oosterschelde. Het macrobenthos van de Galgeplaat, situatie najaar 2011 en veranderingen sinds de aanleg. Monitor Taskforce Publication Series 2012 – 08.
61. Wijnhoven, S., Kromkamp, J. Hoofdstuk 10. Ecologisch Functioneren. In: 1e Tussenrapport T2009 Rapportage Schelde estuarium, Rapportage in het kader van de T2009 Schelde estuarium (Samenwerking ARCADIS, IMDC, UA, NIOZ en IMARES in opdracht van VNSC en RWS-Zeeland), p. 135.
62. Wijnhoven, S., Kromkamp, J. Hoofdstuk 10. Ecologisch Functioneren. In: 2de Tussenrapport T2009 Rapportage Schelde estuarium (Samenwerking ARCADIS, IMDC, UA, NIOZ en IMARES in opdracht van VNSC en RWS-Zeeland), p. 308-315.
63. Wijnhoven, S., Kromkamp, J. Hoofdstuk 9. Ecologisch Functioneren. In: Nota Evaluatie van de Evaluatiemethodiek. Rapportage in het kader van de T2009 Schelde estuarium (Samenwerking ARCADIS, IMDC, UA, NIOZ en IMARES in opdracht van VNSC en RWS-Zeeland), p. 57-60.
64. Wijnhoven, S., van Avesaath, P., Escaravage, V., Hummel, H. Overzicht informatieverlies bij verschillende monitoring scenarios (MWTL bodemdieren). Communicatie naar RWS, maart 2012.
65. Wijsman, J., Goudswaard, K., Wijnhoven, S., Escaravage, V. MEMO: Gemeenschapsanalyse bodemschaafgegevens 2009-2012 en boxcoremonsters 2009–2011 in de Zeeuwse banken. Memo, Monitor Taskforce Publication Series 2012 – 11.

Oral presentations 2012

1. Bakker, M.C. Latest developments in Lab Containers for sea research. INMARTECH, NIOZ, Texel, 25-28 September.
2. Bakker, R. The ROV gas sampler. INMARTECH, NIOZ, Texel, 25-28 September.
3. Bale, N., Villanueva, L., Hopmans, E.C., Schouten, S., Sinninghe Damsté, J.S. Tracing nitrogen cycling microbes in the North Sea using their intact membrane lipids. Darwin Days 2012, Veldhoven, 28-29 March.
4. Bale, N., Villanueva, L., Hopmans, E.C., Schouten, S., Sinninghe Damsté, J.S. and Nicycle partners. Large spatial and temporal variability of key ammonia oxidising microorganisms in the North Sea. ZKO Symposium 2012, Den Haag, 7-8 November.
5. Bendle, J.A., Seki, O., Kawamura, K., Willmott, V., Schouten, S., Sangiorgi, F., McKay, R., Riesselman, C.R., Dunbar, R.B. Biomarker evidence of Holocene climate and cryosphere variability: results from a 171m, annually laminated, sediment core from the Adélie coast, Antarctica (IODP Expedition 318). AGU Fall Meeting, San Francisco, USA, 3-7 December.
6. Bendle, J.A., Toney, J.L., Seki, O., Krishnan, S., Pagani, M., Inglis, G., Pancost, R.D., Bijl, P., Bohaty, S.M., Schouten, S., Pross, J., Contreras, L., Brinkhuis, H., Roehl, U., Jamieson, S. Peatlands, methane cycling and hyperthermals on the East Antarctic continent in the early Eocene. AGU Fall Meeting, San Francisco, USA, 3-7 December.
7. Bergman, M., Duineveld, G., Lavaleye, M. Environmental impact of deep sea mining. William Froude Excursie, TU Delft Maritieme Techniek, Delft, 16 March.
8. Bergman, M.J.N., Duineveld, G.C.A., Daan, R., Mulder, M., Ubels, S. Five years OWEZ Wind farm: too short for recovery of the local macrobenthos community? Amsterdam, 12 October.
9. Biber, M., Duineveld, G., Lavaleye, M., Davies, A., Bergman, M., van den Beld, I. Fish-coral association in the deep Northeast Atlantic Ocean. Annual Meeting EU-CoralFISH, Galway, Ireland, 27 August–1 September.
10. Bijl, P.K., Houben, A.J.P., Sangiorgi, F., Ebbing, A.P.J., Pross, J., Sluijs, A., Brinkhuis, H. Eocene-Miocene dinoflagellate cyst assemblages from the Wilkes Land margin, Antarctica (IODP Leg 318): tracing greenhouse and icehouse dynamics of the Southern Ocean. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
11. Bijleveld, A.I., Massourakis, G., Marel, A., Dekinga, A., Piersma, T. The ecology of personalities: how gizzard size reflects the syndrome in foraging red knots. Annual meeting of the Netherlands Society for Behavioural Biology, Soesterberg, 28-30 November.
12. Blaga, C.I., de Leeuw, J.W., Verschuren, D., Sinninghe Damsté, J.S. A full lipid biomarker based record from Lake Challa, Tanzania. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
13. Blyth, A.J., Woltering, M., Schouten, S., Novel global calibration and application of GDGT temperature proxies in speleothems. AGU Fall Meeting, San Francisco, USA, 3-7 December.
14. Bolhuis, H. Coastal microbial mat diversity along a natural salinity gradient. Invited speaker at the Brunei-Darussalam University as part of a newly established collaboration. 13 November.
15. Bolhuis, H. Haloquadratum: life at the limits of water activity, Semaine thématique interuniversitaire - Microorganismes Extremophiles, 27 November.
16. Bolhuis, H. Lessons from the genes. Darwin Summer School 2012. 11 July.

17. Booij, K. Advances in PSD research. Marine Chemistry Working Group meeting, Southampton, UK, 23 February.
18. Brenner, H., Braeckman, U., Meysman, F. Benthic alkalinity generation and its implications for the pH dynamics and acidification of the North Sea, ZKO Symposium, Den Haag, 7-8 November.
19. Brinkhuis, H. Arctic Deep Drilling. INMARTECH, NIOZ, Texel, 25-28 September.
20. Brussaard, C.P.D. (invited). Viruses in the driver's seat of phytoplankton mortality. PSA (Phycological Society of America), Charleston, USA, 26-30 June.
21. Brussaard, C.P.D. (invited). Ecological consequences of interactions between viruses and microbes in the oceans. VoM (Viruses of Microbes), Brussels, Belgium, 16-20 July.
22. Brussaard, C.P.D. (invited). Does global climate change promote microbial food web activity? ISME14, Copenhagen, Denmark, 19-24 August.
23. Cadée, G.C. Tropical driftseeds on our coast. KNNV Wageningen, 18 January.
24. Cadée, G.C. Fragmented shells more interesting than entire? Zeeuws genootschap, Middelburg, 18 February.
25. Cadée, G.C. Ideeën over de levenswijze van fossiele ammonieten van Aristoteles tot nu. Gelogische Vereniging Het Kristal, Groningen, 18 September.
26. Carreira, C., Staal, M., Middelboe, M., Brussaard, C.P.D. Spatial distribution of microphytobenthos under viral attack. Biofilms 5, Paris, France, 10-12 December.
27. Cathalot, C., Polsenaere, P., Cox, T., van Oevelen, D., Lavaleye, L., Duineveld, G., Kutti, T., Meysman, F. Deep water coral reefs as major heterotrophic benthic ecosystems? Goldschmidt conference, Montreal, Canada, 24-29 June.
28. Chivall, D., M'Boule, D., Kasper, S., Zahn, R., Schouten, S., Sinninghe Damsté, J.S., van der Meer, M.T.J. Towards an organic palaeosalinity proxy. Keynote at the JESIUM 2012, Leipzig, Germany, 2-7 September.
29. Cluderay, J.M.N. 'Time Difference of arrival Bird tracking'. INMARTECH, NIOZ, Texel, 25-28 September.
30. Contreras, L., Pross, J., Greenwood, D.R., Bijl, P.K., Bohaty, S.M., Röhl, U., Stickley, C.E., Schouten, S., Brinkhuis, H. Early Eocene vegetation and climate on the Wilkes Land margin of Antarctica reconstructed from ocean-drilling sediment cores. 34th International Geology Conference, Brisbane, Australia, 5-10 August.
31. Cox, T.J.S., Maris, T., Soetaert, K., Kromkamp, J.J., Meysman, F., Meire, P. A frequency domain based method for estimating gross primary production from high resolution oxygen time series. ECSA 50, Venice, Italy, 3-8 June and invited talk HZG, Hamburg, Germany, 19 September.
32. Cox, T.J.S., Meysman, F. A frequency domain method for estimating GPP & Auto-regressive ecosystem drivers. Hypox final meeting, Rome, Italy, 12-15 March.
33. Cozzoli, F., Bouma, T., Ysebaert, T., Herman, P. Modelling biota-mud interaction in estuaries. NERN days 2012, Lunteren, 7-8 February.
34. Cozzoli, F., Bouma, T., Ysebaert, T., Herman, P. Modelling biota-mud interaction in estuaries. 50th ECSA, Venice, Italy, 3-7 June and 42nd Annual Meeting of the Ecological Society of Germany, Austria and Switzerland, Lüneburg, Germany, 10-14 September.
35. Cozzoli, F., Eelkema, M., Bouma, T., Ysebaert, T., Herman, P. Biota-sediment interactions: response to morphodynamic management. British Ecological Society Meeting 2012, Birmingham, United Kingdom, 17-21 December.

36. de Bruin, T.F. WP4 presentatie. WaLTER Brainstorm bijeenkomst, Warfstermolen, 6-7 February.
37. de Bruin, T.F. Oceanografisch data management (bij het NIOZ): De gebruiker staat centraal, van data inwinning tot data ontsluiting. SURF Onderzoeksdata Forum, Texel, 29-30 March.
38. de Bruin, T.F. An (Antarctic) Treaty as a stick, while the carrots still have to mature. Action Forum - Data Management: achieving open and secure data for future science. IPY2012 Conference - From Knowledge to Action, Montreal, Canada, 22-27 April.
39. de Bruin, T.F. Commentary of statement 3 – Data Management Plan. NWO Seminar on Open Access data, Den Haag, 4 June.
40. de Bruin, T.F. Eén dataportaal. WaLTER Klankbordgroep-bijeenkomst, Texel, 7 June.
41. de Bruin, T.F. Polar Metadata Profile. SCADM 2012 meeting, Portland, Oregon, USA, 13-14 July.
42. de Bruin, T.F. Report from the Netherlands National Polar Data Centre (NL-NPDC). SCADM 2012 meeting, Portland, Oregon, USA, 13-14 July.
43. de Bruin, T.F. SCADM Chief Officer's Report. Standing Committee on Antarctic Data Management (SCADM) 2012 meeting, Portland, Oregon, USA, 13-14 July.
44. de Bruin, T.F. SCAR DIMS Implementation Plan - Overview and status. SCADM 2012 meeting, Portland, Oregon, USA, 13-14 July.
45. de Bruin, T.F. SCADM - Standing Committee on Antarctic Data Management - Exciting new developments on the horizon. SCAR SSGs joint session, Portland, Oregon, USA, 15 July.
46. de Bruin, T.F. An update on the SCAR Data and Information Strategy (DIMS) Implementation. SCAR Delegates meeting, Portland, Oregon, USA, 23-25 July.
47. de Bruin, T.F. Data and information exchange - IODE and The Netherlands. National IOC Workshop, Den Haag, 13 September.
48. de Bruin, T.F. Preservation of data collected onboard an ocean-going research vessel. American Geophysical Union Fall Meeting, San Francisco, USA, 3-7 December.
49. de Bruin, T.F. An operational data access infrastructure for accessing integrated environmental and socio-economic data from the Dutch Wadden Sea. American Geophysical Union Fall Meeting, San Francisco, USA, 3-7 December.
50. de Goeij, P., Jouta, J., Lok, T., Overdijk, O. Grenzen aan de groei, Nog meer/waarom lepelaars kleurringen? SBB Terschelling, SBB Vlieland, Natuurmonumenten Texel, spring 2012.
51. de Kluijver, A. Human impact on carbon cycling in plankton food webs from micro- to global scale. Eco-Das symposium, Honolulu, Hawaii, USA, 8-13 October.
52. de Kluijver, A., Soetaert, K., Czerny, J., Schulz, K.G., Boxhammer, T., Riebesell, U., Middelburg, J.J. A ¹³C labeling study of carbon fluxes in Arctic plankton communities under elevated CO₂ levels. EPOCA final meeting, Nice, France, 2-5 April.
53. De Mesel, I., Wijnhoven, S., Goudswaard, K., Van Duin, W., Ysebaert, T., Schellekens, T. Flora en Fauna - Resultaten, Knelpunten en Methodiek. Presentatie in het kader van de T2009 Schelde-estuarium. Thematische bijeenkomst, Antwerp, Belgium, 6 December.
54. de Steur, L., Hansen, E., Mauritzen, C., Beszczynska-Möller, A. Transport of the East Greenland Current in Fram Strait. Solicited talk EGU General Assembly, Vienna, Austria, 22-27 April.

55. de Steur, L., Pickart, R.S., Våge, K., Jonsson, S., Valdimarsson, S. The sources of the Denmark Strait Overflow Water project - top to bottom. Arctic-Subarctic Ocean Fluxes (ASOF) meeting, Lerici, Italy, 8-10 October.
56. de Steur, L., Steele, M., Hansen, E., Morison, J., Melling, H., McLaughlin, F., Olsen, S., Polyakov, I., Kwok, R. A freshwater anomaly in the Lincoln Sea. Arctic-Subarctic Ocean Fluxes (ASOF) meeting, Lerici, Italy, 8-10 October.
57. de Vries, J.J., van Aken, H.M., Nauw, J.J., Variability of currents and vertical stratification in the Marsdiep, NCK days 2012 conference, Enschede, 13-16 March.
58. Drent, J. Benthos en vis. Balgzand. Bezoekerscentrum 't Kuitje, Den Helder, 24 March.
59. Drent, J., Dekker, R. Mussel seed beds and culture plots: differences in biodiversity. International workshop on mussel-related research in the Wadden Sea, Leeuwarden, 19-20 November.
60. Duijns, S., Knot, I., van Gils, J.A., Piersma, T. Functional response curve of Bar-tailed Godwits (foraging on Lugworms). Wader Study Group Meeting, Séné, France, 21-23 September.
61. Escutia, C., Brinkhuis, H., Dunbar, R., Klaus, A., the Carlota Escutia Team. From the greenhouse to the icehouse in the Antarctic Wilkes Land margin: IODP Expedition 318. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
62. Fan, H., Stal, J.L. Nitrogen cycle in marine microbial mats. 14th ISME meeting, Copenhagen, Denmark, 19-24 August.
63. Feis, M.E., Thieltges, D.W., de Montaudouin, X., Jensen, K.T., Bazairi, H., Culloty, S.C., Luttikhuisen, P.C. Parasite population genetic structure in relation to definitive host type. 2012 meeting of the Society for Integrative and Comparative Biology, Charleston, USA, 3-7 January.
64. Freitas, V., Witte, J.I.J., Tulp, I., Rijnsdorp, A.D., van der Veer, H.W. Spatial and temporal variability in habitat quality in flatfish nurseries in the western Wadden Sea. NWO - ZKO Symposium 2012, Den Haag, 7-8 November.
65. Gerkema, T., van Haren, H. Absence of internal tidal beams due to non-uniform stratification. European Geosciences Union, General Assembly 2012, Wien, Austria, 23-27 April.
66. Gerringa, L.J.A., Alderkamp, A-C., Laan, P., Thuróczy, C-E., de Baar, H.J.W., van Dijken, G.L., van Haren, H., Arrigo, K.R. Fe from melting glacier fuels the algal bloom in Pine Island Bay (Amundsen Sea, Southern Ocean). Symposium: Fe in the oceans. NIOZ, Texel, 4 October and Université de Bretagne Occidentale, Brest, France, 19 December.
67. Gerringa, L.J.A., Rijkenberg, M.J.A., Thuróczy, C-E., Maas, L.R.M., de Baar, H.J.W. The interpretation of organic Fe complexation data. COST ES0801 GEOTRACES Workshop Sibenik Croatia, 7-9 October.
68. Gostiaux, L., van Haren, H. A complete sketch for fine-structure contamination by internal waves. European Geosciences Union, General Assembly 2012, Wien, Austria, 23-27 April.
69. Greinert, J. Introduction to methane seeps. Benthic foraminifera, bio-indicator of natural and man-made methane/oil emission - COST-PERGAMON Mini-workshop at NIOZ, Texel, 26-29 June.
70. Greinert, J., Veloso, M., Mienert, J., Sommer, S., Bussmann, I., van Haren, H. Methane release from seeps offshore W-Svalbard: Considerations to extrapolate fluxes into the water/atmosphere. European Geosciences Union, General Assembly 2012, Wien, Austria, 23-27 April.
71. Groenewegen, R.L. Mechanical, electrical and optical termination of NIOZ 20 Tons Aramid cable. INMARTECH, NIOZ, Texel, 25-28 September.

72. Grove, C.A. Climatic and anthropogenic drivers of river runoff in northeast Madagascar. Seminar, the University of Western Australia, Perth, 2 August.
73. Grove, C.A., Maina, J., de Moel, H., Vermaat, J., Madin, J., Brummer, G-J.A., Zinke, J. Climatic and anthropogenic drivers of river runoff in northeast Madagascar. ICRS 2012, Cairns, Australia, 9-13 June.
74. Grove, C.A., Rodriguez-Ramirez, A., Merschel, G., Tjallingii, R., Zinke, J., Brummer, G-J.A. Spectral luminescence scanning: updates and developments. Coral paleo working group meeting, RWTH Aachen, Germany, 27 September.
75. Haaijer, S.C.M., Yan, J., Sinninghe Damsté, J.S., Jetten, M.S.M., Schouten, S., Op den Camp, H.J.M. Marine microbial ammonium conversion under oxygen-limited conditions. Darwin Days 2012, Veldhoven, 28-29 March.
76. Herman, P.M.J. Blue Energy and Ecology. Wetsus symposium, Leeuwarden, 19 April.
77. Herman, P.M.J. De ecologische behoeften van het IJsselmeer en de Waddenzee. Waddenacademiesymposium, Den Oever, 3-4 July.
78. Herman, P.M.J. Nature conservation in the Wadden Sea – challenges towards a climate-friendly Wadden Sea region. Wadden Sea Day, Wilhelmshaven, 30 August.
79. Herman, P.M.J. Relevant ecology and the management of coastal areas. Symposium prijswinnaar van de Heinekenprijs voor de Milieuwetenschappen 2012, Prof. Willam Laurance. Groningen, 29 September.
80. Herman, P.M.J., Bouma, T., van de Koppel, J., Borsje B.W., van Belzen, J., Balke, T. Thresholds in biogeomorphology. AGU, San Francisco, USA, 3-7 December.
81. Herman, P.M.J., Ysebaert, T. van de Koppel, J., Schwarz C., Ma, Z., Zhu, Z., Zhang, Z., Li, X., Balke, T., van Belzen, J., Bouma, T.J. Thresholds in biogeomorphology. International Symposium on coastal response to climate change and human activity. Shanghai, China, 29-31 October.
82. Hummel, C.A., van Avesaath, P.H., Hummel, H. Changes in the fish populations of the Eastern Scheldt due to changes of the tidal regime. European Marine Biology Symposium, Arendal, Norway, 3-7 September.
83. Hummel, H. Genetic, physiological and ecological patterns of biodiversity in coastal benthic ecosystems: A North-South comparison at European scale. Invited seminar, University of South Carolina, Columbia, SC, USA, 10-14 November.
84. Hummel, H., Hummel, C.A. The 2012 Survey and Business Plan for the MARS Network. EuroMarine General Assembly and MARS Directors meeting, Brussels, Belgium, 10-11 December.
85. Hummel, H., van Avesaath, P. Marine infrastructures and observatories in Europe: First survey results. EuroMarine General Assembly and EMBOS WGOS workshop, Bremen, Germany, 17-19 January.
86. Hummel, H., van Avesaath, P. Development and implementation of a pan-European Marine Biodiversity Observatory System. COST EMBOS Management Committee meeting, Zandvoort, 24-25 May.
87. Hummel, H., van Avesaath, P. The European Marine Biodiversity Observatory System (EMBOS). ESF-COST Domain Committee meeting, Alexandroupolis, Greece, 19-22 June.
88. Hummel, H., van Avesaath, P. An introduction to the joint efforts regarding Marine infrastructures and observatories in Europe. Joint COST EMBOS, EuroMarine, LifeWatch meeting, Lecce, Italy, 3-5 December.

89. Hummel, H., Wijnhoven, S. Patterns of biodiversity in coastal benthic ecosystems under pressure of global change? A comparison from the genetic to the system level at European scale. Keynote lecture, MarCoastEcos2012, Tirana, Albania, 25-28 April.
90. John, C.M., Browning, E., Lowery, C., Leckie, R.M., Karner, G.D., Schouten, S. Miocene history of the East Antarctic ice-sheet inferred from the eustatic and paleoceanographic record of the Marion Plateau, Northeastern Australia (ODP Leg 194). AGU Fall Meeting, San Francisco, USA, 3-7 December.
91. Keijzer, E.J.H. NIOZ Deep Digging Dredge. INMARTECH, NIOZ, Texel, 25-28 September.
92. Keijzer, E.J.H. Ultraclean CTD system with a special NIOZ ultra clean bottles. INMARTECH, NIOZ, Texel, 25-28 September.
93. Kim, J.-H., Zell, C., Moreira-Turcq, P., Pérez, M.A.P., Abril, G., Mortillaro, J.-M, Weijers, J.W.H., Meziane, T., Sinninghe Damsté, J.S. Tracing soil organic carbon in the lower Amazon River and its tributaries using GDGT distributions and bulk organic matter properties. AOGS – AGU (WPGM) Joint Assembly, Resorts World Sentosa, Singapore, 13-17 August.
94. Kool, D.M., Rijpstra, W.I.C., Ettwig, K.F., Jetten, M.S.M., Sinninghe Damsté, J.S. The potential of lipid biomarkers for the unique methane oxidizer *Methyloirabilis oxyfera*. Darwin Days 2012, Veldhoven, 28-29 March.
95. Kool, D.M., Rijpstra, W.I.C., Ettwig, K.F., Jetten, M.S.M., Sinninghe Damsté, J.S. A new microbial player in the methane cycle; prospects for lipid and isotope biomarkers. Seminar at University of Gothenburg, Department of Plant and Environmental sciences, Gothenburg, Sweden, 26 January.
96. Kool, D.M., Rijpstra, W.I.C., Zhu, B., Ettwig, K.F., Jetten, M.S.M., Sinninghe, Damsté J.S. In search for lipid biomarkers for nitrite dependent methane oxidation. Seminar at School of Civil Engineering and Geosciences, Newcastle University, Newcastle, UK, 23 November.
97. Kromkamp, J.C., Silsbe, G., Waanders, J. The Protool Project a tool for automated primary production measurements of phytoplankton. Ocean Sciences Meeting, Salt Lake City, UT, USA, 19-24 February and PROTOOL end-user meeting, Helsinki, Finland, 29-31 August.
98. Kromkamp, J.C., Silsbe, Peene, J.G., Waanders, J. The Protool Project a tool for automated primary production measurements of phytoplankton. ASLO summer Meeting, Otsu, Japan. 8-13 July.
99. Lavaleye, M.S.S., Duineveld, G.C.A., Bergman, M.J.N., Witbaard, R. Mapping larger infauna and epifauna distribution in the Dutch part of the North Sea. ICES, Benthos Ecology Working Group Meeting, Reykjavik, Iceland, 6-11 May.
100. Lavaleye, M.S.S. Life under pressure. PERC Symposium Extreme Environments, Wageningen University, Wageningen, 1 November.
101. Lavaleye, M.S.S., Duineveld, G. Lucky Strike vent field characterization. TZI meeting, Boskalis, Papendrecht, 22 August.
102. Lavaleye, M.S.S., Duineveld, G., Davies, A., Mienis, F., Bergman, M. Cold water coral communities: overview of variability in morphology, environmental conditions and fauna with a Trans-Atlantic comparison. Annual Meeting EU-HERMIONE, Carvoeira, Portugal, 11-14 September.
103. Lavaleye, M.S.S., Duineveld, G., Mienis, F., Ross, S., Davies, A., Brooke, S. Cold water corals in the Gulfstream (Cape Lookout, NC). International Deep Sea Coral Symposium, Amsterdam, 2-6 April.
104. Lok, T. Lepelaars op trek. Een vergelijking tussen Europa- en Afrika-gangers. WIWO-dag. Utrecht, 3 March.

105. Lok, T., Overdijk, O., Piersma, T. Migration tendency hinders population response to variation in survival prospects along the flyway. RuG-MEE meeting, Gaast, 24 April.
106. Lok, T., Overdijk, O., Tinbergen, J.M., Piersma, T. Age-specific density dependence in seasonal survival of spoonbills. Netherlands Annual Ecological Meeting, Lunteren, 7-8 February.
107. Loomis, S.E., Russell, J.M., Sinninghe Damsté, J.S. The influence of nutrients on the relative distributions of brGDGTs and implications for the lacustrine paleothermometer. AGU Fall Meeting, San Francisco, USA, 3-7 December.
108. Lopez-Rodriguez, C., Stadnitskaia, A., de Lange, G.J., Martínez-Ruiz, F., Comas, M., Sinninghe Damsté, J.S. Active hydrocarbon (methane) seepage at the Alboran Sea mud volcanoes indicated by specific lipid biomarkers. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
109. Lückge, A., Deplazes, G., Stuut, J.-B.W., Pätzold, J., Kuhlmann, H., Scheeder, G., Haug, G.H. Monsoonal and oceanographic variability in the Arabian Sea during the last glacial period. AGU Fall meeting, San Francisco, USA, 3-7 December.
110. Luttikhuisen, P.C. Comparing outlier detection and genomic clines analysis in the bivalve *Macoma balthica*. Workshop on the Evolutionary Potential of Marine Organisms, Sylt, Germany 23-27 April.
111. Ly, J. Effects of environmental changes on phospholipids fatty acid composition in diatoms community. 22^{de} international diatom symposium, Ghent, Belgium, 26-31 August.
112. Ma, Z., Ysebaert, T., van der Wal, D., de Jong, D.J., Li, X., Herman, P.M.J. Salt marsh vertical accretion under sediment starvation: the case of the Oosterschelde, the Netherlands. International Symposium on Climate change and human activities: Coastal Consequences and Responses, Shanghai, China, 28-31 October.
113. Maas, L.R.M. Onderwatergolven, Koninklijke Marine, Den Helder, 7 February.
114. Maas, L.R.M. Effects of fluid stratification on swimming, rowing and paddling. Conference on 'Physics of Sports', Ecole Polytechnique, Paris, France, 3 April.
115. Maas, L.R.M. Lectures on wave attractors I-III, Université de Paris XI, laboratoire FAST, France, 1-13 April.
116. Maas, L.R.M. Lectures on wave attractors IV-VI, Université de Paris XI, laboratoire FAST, 18-29 May.
117. Malkin, S., Seitaj, D., Meysman, F.J.R. Microbial sulphide oxidation by long distance electron transport finds a niche in marine hypoxic zones, ASLO conference, Lake Biwa, Japan, 8-13 July.
118. Maris, T., Wijnhoven, S., van den Bergh, E., Meire, P. Evaluatiemethodiek: oppervlaktelijsten. Presentatie in het kader van de Aanvullende opdracht T2009 Schelde-estuarium – Habitat oppervlaktes Westerschelde, Experts-meeting, VNESC, Bergen op Zoom, 27 September.
119. Meysman, F.J.R. Microbial batteries in the seafloor: a novel form of electrogenic microbial metabolism 2nd International PlantPower Symposium, Keynote speaker, Wageningen, 22-23 November.
120. Meysman, F.J.R., Meire, L., Soetaert, K.E.R. How strongly does climate change increase the risk of hypoxia in the central north sea?, ASLO conference, Lake Biwa, Japan, 8-13 July.
121. Moerdijk-Poortvliet, T.C.W., Miyatake, T., Stal, L.J., Boschker, H.T.S. LC/IRMS analysis: a powerful technique to trace carbon flows from microphytobenthos to the bacterial community in an intertidal marine sediment. International Symposium: Trophic significance of microbial biofilm in tidal flats, La Rochelle, France, 6-10 June.

122. Moerdijk-Poortvliet, T.C.W., Stal, L.J., Boschker, H.T.S. Carbon cycling in benthic diatom mats: a seasonal ¹³C in-situ labeling study. International symposium ASLO Aquatic Science meeting, Lake Biwa, Otsu, Japan, 8-13 July.
123. Mojica, K.D.A., Brussaard, C.P.D. Vertical stratification enhances the viral shunt and impacts marine food web structure. ZKO-Symposium, NWO, Den Haag, 7-8 November.
124. Mollenhauer, G., Uliana, E., Basse, A., Kim, J-H., Romero, O., Schefuß, E., Hefter, J., Fischer, G. Comparison of three organic geochemical proxies for sea-surface temperatures in a four year sediment trap record. Earth in Evolution, the 22nd V.M. Goldschmidt Conference, Montréal, Canada, 24-29 June.
125. Moneta, A., Veuger, B., van Rijswijk, P., Meysman, F., Soetaert, K., Middelburg, J.J. Dissolved inorganic and organic nitrogen and carbon uptake in tidal inlet waters: a seasonal study. 2012 ASLO Aquatic Sciences Meeting, Lake Biwa, Otsu, Shiga, Japan, 8-13 July.
126. Montserrat, F., Van Colen, C., van Prooijen, B.C., Ysebaert, T., Herman, P. Estuarine ecosystem engineering: biogeomorphological interactions in the estuarine intertidal. 2012 ASLO Aquatic Sciences Meeting, Lake Biwa, Otsu, Shiga, Japan, 8-13 July.
127. Moreira, L., Moreira-Turcq, P., Turcq, B., Cordeiro, R.C., Caquineau, S., Kim, J.H., Sinninghe Damsté, J.S. Holocene paleoenvironmental reconstruction in Santa Ninha Lake based on branched and isoprenoid tetraether lipids. AGU Fall Meeting, San Francisco, USA, 3-7 December.
128. Mueller, B., Mulders, Y., van Duyl, F.C. DOC uptake by the excavating sponge *Cliona delitrix*. Internal meeting at the CIEE Research Station, Bonaire, 13 March.
129. Mueller, B., van Duyl, F.C. Dissolved Organic Matter (DOM) in the Ocean. Tropical Marine Biology Course of the University of Amsterdam, Curaçao, 9 January–3 February.
130. Mueller, B., van Duyl, F.C. Algal-driven bio erosion on Caribbean Coral Reefs. –A hypothesis. Public lecture at the CIEE Research station, Bonaire, 28 February.
131. Mueller, B., van Duyl, F.C. Future of reefs in a changing environment. An ecosystem approach to managing Caribbean coral reefs in the face of climate change. EUCARINET Fostering EU-Caribbean Research and Innovation Networks week, Curaçao, 23-27 April.
132. Mueller, B., van Duyl, F.C. Effect of light on DOC production by benthic primary producers. Youmares 3, Luebeck, Germany, 12-14 September.
133. Mueller, C.E., van Oevelen, D., Larsson, A.I., Middelburg, J.J. Uptake of various food sources by *Lophelia pertusa*-Opportunistic feeding?. 5th International Symposium of Deep-Sea corals, Amsterdam, 1-6 April.
134. Mueller, C.E., van Oevelen, D., Lundälv, T., Middelburg, J.J. Influence of *Eunice norvegica* on feeding and calcification in the coral *Lophelia pertusa*. EGU General Assembly, Vienna, Austria, 22-27 April.
135. Mulders, Y., Mueller, B., van der Ent, E., Sangiorgi, F., van Duyl, F.C. Organic matter cycling by 3 species of coral excavating sponges. Youmares 3, Luebeck, Germany, 12-14 September.
136. Nauw, J., de Haas, H. A modeling intercomparison for the North Sea with a view to methane dispersion. DECC teleconference, London, UK, 13 December.
137. Nauw, J., Tiessen, M., Gerkema, T., Ruurdij, P. Modeling hydrodynamics and sediment transport dynamics in the Dutch western Wadden Sea using GETM/GOTM. PACE kick-off meeting, Delmenhorst, Germany, 6-7 March.
138. Nauw, J., van der Vegt, M. Hydrodynamics of the Rhine ROFI near IJmuiden. NCK days, Enschede, 13-16 March.

139. Niemann, H., Stadnitskaia, A., Wirth, S.B., Gilli, A., Anselmetti, F.S., Sinninghe Damsté, J.S., Schouten, S., Hopmans, E.C., Lehmann, M.F. Bacterial GDGTs in Holocene sediments and catchment soils of a high-alpine lake: application of the MBT/CBT-paleothermometer. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
140. Nogueira, A.F., Freitas, V., van der Veer, H.W., Campos, J. Physiological condition of juvenile flatfish in the Dutch Wadden Sea. IJUP2012 Meeting of Young Researchers of University of Porto, Porto, Portugal, 22-24 February.
141. Novoa, S., Wernand, M.R. Preparation for exploitation and demonstration within Citizens' observatory for coast and ocean optical monitoring. BDigital, Barcelona, Spain, 22-23 October.
142. Philippart, C.J.M & WaLTER team WaLTER - Wadden Sea Long-Term Ecosystem Research. Meeting with the Province of Groningen. Groningen, 23 January.
143. Philippart, C.J.M. & WaLTER team. Beter Benutten – WaLTER & Geonovum. Meeting with Geonovum, Texel, 1 June.
144. Philippart, C.J.M. & WaLTER team. Sensing marine life and livelihoods at the seashore - An integrated monitoring network for the Wadden Sea, a coastal UNESCO World Heritage site. Annual Meeting of the North Pacific Marine Science Organization (PICES), Hiroshima, Japan, 12-21 October.
145. Philippart, C.J.M. & WaLTER team. Sensing marine life and livelihoods at the seashore - An integrated monitoring network for the Wadden Sea, a coastal UNESCO World Heritage site. The 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21–23 November.
146. Philippart, C.J.M. & WaLTER team. WaLTER - Wadden Sea Long-Term Ecosystem Research. Meeting with the Waddenvereniging, Texel, 29 March, Meeting with a Delegate of the Province of North Holland and the Board of Mayor and Aldermen of Texel, Texel, 12 April, Annual Meeting of the Wissenschaftliches Monitoring Deutsche Bucht (WIMO), Delmenhorst, Germany, 23 April, Meeting of the WaLTER Resonance Group, Texel, 6 July and Site visit of Programmaregisseurs of the Waddenfonds, Texel, 7 September.
147. Philippart, C.J.M. Het NIOZ in vogelvlucht. Meeting with the Boards of Mayor and Aldermen of Texel and Den Helder, Texel, 5 October.
148. Philippart, C.J.M. Impacts of climate change on the Wadden Sea. Site visit high school deans, Texel, 19 April.
149. Philippart, C.J.M. Review of draft research plan. SEAS-ERA evaluation meeting. Oostende, Belgium, 28 February.
150. Philippart, C.J.M., Besemer, J.J.W. WaLTER - Wadden Sea Long-Term Ecosystem Research. Meeting of the Netherlands Geodetic Commission (NCG-KNAW), Apeldoorn, 19 December and NWO Sea and Coastal Research (ZKO) Symposium. Den Haag, 7-8 November.
151. Philippart, C.J.M., Calewaert, J.B., McDonough, N., Heip, C.H.R. Changing climate and changing seas in Europe: a story about fire, ice and water. The 47th European Marine Biology Symposium, Arendal, Norway, 3-7 September.
152. Philippart, C.J.M., van Aken, H., van Dijk, M., Eijgenraam, F., Kooijman, K., Kromkamp, J.C., Lenting, W., Salama, M.S., Veenstra, M., Wagemaakers, E., Watmough, T., Wernand, M., van der Woerd, H., Wuis, L. and many others. Primary productivity of the Wadden Sea from a carrying capacity perspective. Sensor meeting between IN PLACE and RWS, Texel, 4 December.
153. Philippart, C.J.M., van Dijk, M., Salama, M.S., Kromkamp, J.C. Shellfish dynamics from a carrying capacity perspective: the known knowns, the unknown knowns and the unknown unknowns. Mussel workshop, Leeuwarden, 19-20 November.

154. Philippart, C.J.M., Winder, M., McQuatters-Gollop, A., Cloern, J., Lehtinen, S., O'Brien, T. The role of spatial scale in explaining long-term phytoplankton dynamics. SCOR Workgroup 137 Meeting, Hiroshima, Japan, 11-13 October.
155. Philippart, C.J.M., Witbaard, R. Mussels, the canaries of the sea. Site visit of His Royal Highness Prince Willem-Alexander of Oranje to celebrate the fusion NIOZ YE & TX. Yerseke, 4 April.
156. Piersma, T. The plight of the Bohai Bay mudflats, China. Broome Bird Observatory lecture, Broome, Australia, 6 February.
157. Piersma, T. Conservation ecology of red knot. Broome Bird Observatory lecture, Broome, Australia, 20 February.
158. Piersma, T. The population ecology of (shore-)birds: the importance of getting the ecological context right. Colloquium Max Planck Institute for Ornithology, Seewiesen, Germany, 23 February.
159. Piersma, T. Ecological research by Dutch teams in Roebuck Bay. Roebuck Bay Working Group meeting, Broome, Australia, 23 March.
160. Piersma, T. Introducing tracking systems in shorebirds. Cornell University/NIOZ workshop, NIOZ, 2 April.
161. Piersma, T. Zuiderzeeblues. Tresoar, Leeuwarden, 10 April.
162. Piersma, T. Introducing the Chair in Global Flyway Ecology. Animal Ecology/MEE meeting, Gaast, 23 April.
163. Piersma, T. Research on shorebirds and their benthic food resources. Lecture for Animal Experimentation Committee KNAW, Texel, 27 April.
164. Piersma, T. The key role of the Bohai Bay mudflats in the shorebird migration systems of the world. WWF International Seminar, Tianjin, China, 25 May.
165. Piersma, T. What is it like to be a bird? Oerol Lecture, Midsland, Terschelling, 16 June.
166. Piersma, T. Introducing Metawad, the consortium of demography studies in the Wadden Sea and beyond. Programma Naar een Rijke Waddenzee, Leeuwarden, 26 June.
167. Piersma, T. Ruff conservation in northwest Europe – a perspective from The Netherlands. Final Seminar LIFE project Baltic, Kiel, Germany, 28 August.
168. Piersma, T. East Asian mudflats in peril: the case of Bohai Bay, China. Annual Conference International wader Study Group, Sene, France, 23 September.
169. Piersma, T. Meadowbirds in southwest Friesland. Seminar Landbouwagonde Southwest Friesland, Idzegea, 25 September.
170. Piersma, T. Flyway ecology. Evening Lecture CEES day, 4 October.
171. Piersma, T. Unlikely and likely limits to organismal adjustment: avian phenotypes coping with environmental context. Ecogenes EU Conference, Sevilla, Spain, 15 November.
172. Piersma, T. Effects of modern agriculture on meadow biodiversity. North Holland Natural History Day, Amsterdam, 8 December.
173. Piersma, T. Evolution of yesterday and today. The role of interactions between phenotype and environment. Darwin Lecture, Darwin Institute for Biogeology, Naturalis, Leiden, 16 December.

174. Piersma, T., Kentie, R., Hooijmeijer, J.C. The demography of black-tailed godwits. National BirdDay, Nijmegen, 24 November and Youth Panel, Provincial House, Leeuwarden, 19 December.
175. Piersma, T., Pruiksmā, S. The music of migration. Opening ceremony World Conference of World Wildlife Fund, Rotterdam, 7 May, Evening performance in the RUG Night of Arts and Sciences, Groningen, 2 June and Afternoon Performance at WNF, Zeist, 17 December.
176. Piersma, T., Pruiksmā, S. The cry of the godwit. Performance in Provincial House, Leeuwarden, 17 July.
177. Polsenaere, P., Cathalot, C., Cox, T., Maire, O., Deflandre, B., Meysman, F.J.R., Benthic O₂ fluxes measured by Eddy Covariance in a large flume facility. Goldschmidt conference, Montréal, Canada, 24-29 June.
178. Quaijtaal, W., Schouten, S., Donders, T., Louwye, S. Middle Miocene environmental change in the eastern Atlantic Ocean at the Porcupine Basin (IODP Leg 307): results from an integrated palynological and biogeochemical study. 34th International Geology Conference, Brisbane, Australia, 5-10 August.
179. Rabitti, A., Maas, L.R.M. Wave ray dynamics of rotating spherical fluid domains. Workshop on "Rotational dynamics for planetary and stellar applications", Marseille, France, 30 May.
180. Rabitti, A., Maas, L.R.M. Wave dynamics of rotating spherical fluid domains, Burgersdag, TU Eindhoven, 12 January.
181. Rao, A., Polerecky, L., Ionescu, D., Meysman, F.J.R., de Beer, D. CaCO₃ dynamics in permeable reef sediments: The role of hydrodynamics and benthic metabolism. TOS/ASLO/AGU Ocean Sciences Meeting, Salt Lake City, USA, 20-24 February.
182. Ridderinkhof, H. Introducing NIOZ Seagoing Research. INMARTECH, NIOZ, Texel, 25-28 September.
183. Rijkenberg, M.J.A., Gerringa, L.J.A., Laan, P., Schoemann, V., Middag, R., van Heuven, S.M.A.C., Salt, L., Jones, E.M., van Aken, H.M., de Jong, J.T.M., de Baar, H.J.W. The distribution of dissolved Fe in the Western Atlantic Ocean, Ocean Sciences Meeting, Salt Lake City, United States, 20-24 February.
184. Rijkenberg, M.J.A., Gerringa, L.J.A., Laan, P., Schoemann, V., Middag, R., van Heuven, S.M.A.C., Salt, L., Jones, E.M., van Aken, H.M., de Jong, J.T.M., de Baar, H.J.W. GEOTRACES: What we learnt from the distribution of dissolved iron in the western Atlantic Ocean, ZKO funding agency Symposium, Den Haag, 8 November.
185. Rodrigo-Gámiz, M., Rampen, S.W., Schouten, S., Sinninghe Damsté, J.S. Testing and applying the Long chain Diol Index (LDI) as a novel paleotemperature proxy. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
186. Rush, D., Hopmans, E., Jaeschke, A., Lewan, M., Wakeham, S., Geenevasen, J., Schouten, S., Sinninghe Damsté, J. Fate of ladderanes and other lipids of the anammox bacteria. Gordon Research Seminar, 28-29 July and Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
187. Salama, M.S., Kromkamp, J.C., van Dijk, M., Folmer, E.O., van der Woerd, H., Wernand, M., Ly, J., Philippart, C.J.M. Remote sensing of primary production in the Wadden Sea environments. NWO Sea and Coastal Research (ZKO) Symposium. Den Haag, 7-8 November.
188. Sangiorgi, F., Passchier, S., Salzmān, U., Schouten, S., Pross, J., Bijl, P., Tauxe, L., Bendle, J.A., Escutia, C., Brinkhuis, H. Middle Miocene environmental and climatic evolution at the Wilkes Land margin, East Antarctica. AGU Fall Meeting, San Francisco, USA, 3-7 December.

189. Schilling, J. Testing Super Aramide cables with optical fibres + copper conductors. INMARTECH, NIOZ, Texel, 25-28 September.
190. Schouten, S. Microbial natural products from the deep ocean. Symposium "Inspired by the Art of Nature", Groningen University, Groningen, 24 October.
191. Schouten, S. Organic proxies for paleoclimate reconstructions: the good, the bad, and the reasonable. Darwin Days 2012, Veldhoven, 28-29 March.
192. Schouten, S. Past sea water temperatures based on organic proxies: the good, the bad and the incomprehensible. Oxford University, Oxford, UK, 8 June.
193. Schouten, S. Taking the temperature of ancient greenhouse Earth using organic proxies. Towards the International Ocean Discovery Program, IODP Symposium, Utrecht, 12 October.
194. Schouten, S., Lengger, S., Pitcher, A., Hopmans, E., Villanueva, L., Sinninghe Damsté, J.S. Intact polar tetraether lipids in the Arabian Sea water column and sediments: Implications for TEX₈₆ paleothermometry. Earth in Evolution, the 22nd V.M. Goldschmidt Conference, Montréal, Canada, 24-29 June.
195. Schwarz, C., Ysebaert, T., Temmerman, S., Zhang, L.Q., Herman, P.M.J. Influences of vegetation and sediment type on tidal channel initiation and its consequences for landscape development, 2012 ASLO aquatic science meeting, Japan, 8-13 July.
196. Schwarz, C., Ysebaert, T., Ye Q.H., Zhang, L.Q., Herman, P.M.J. Vegetation characteristics influencing geomorphologic feedbacks: A modeling study on tidal channel emergence, Delft3D User Meeting 2012, Delft, 27 November.
197. Silsbe, G.M., Kromkamp, J.K., Simis, S., Ylostalo, P., Wright-Smythe, D., Daniel, A., Rottgers, R. Physiological Optimization of photosynthetic electron transport in European coastal waters. Association of Limnology and Oceanography Scientists, Otsu Japan, 8-13 July.
198. Sinninghe Damsté, J.S. Biomarkers in Lake Challa sediments: Past application and potential use in the ICDP Deep Challa Project. International Workshop on scientific drilling of Lake Challa: the climatic and ecological history of equatorial Africa. Nairobi and Taveta, Kenya, 10-13 September.
199. Sinninghe Damsté, J.S., Rampen, S., Rodrigo, M., Lopes-dos Santos, R., Schouten, S. Sedimentaire diolen als nieuwe proxies voor palaeothermometrie. Invited lecture at the KNAW, Amsterdam, 18 June.
200. Śliwinska, K.K., Schouten, S. Late Paleogene temperature reconstructions from the northern high latitudes (ODP Sites 643A and 647A). 34th International Geology Conference, Brisbane, Australia, 5-10 August.
201. Sluijs, A., Slomp, C.P., Schouten, S. The role of and impact on the biosphere in shelf ocean anoxia during the Paleocene-Eocene Thermal Maximum. AGU Fall Meeting, San Francisco, USA, 3-7 December.
202. Smedes, F., Booij, K. Construction of water-sediment sorption isotherms for polycyclic aromatic hydrocarbons by application of equilibrium passive sampling using multiple sampler-sediment ratios. SETAC Europe 22nd Annual Meeting, Berlin, Germany, 20-24 May.
203. Smit, M.G. Antarctica container project and a new container climate test facility. INMARTECH, NIOZ, Texel, 25-28 September.
204. Smith, M.J., De Deckker, P., Brocks, J.J., Schmidt, S., Hope, J., Lopes dos Santos, R., Schouten, S. Biomarker records of sea-surface temperatures over the last few centuries in the Australian region. Australian Organic Geochemistry Conference 2012, North Ryde, Australia, 3-4 December.

205. Soetaert, K., Mohn, C., Rengstorf, A., Grehan, A., van Oevelen, D. Direct link of 600 m deep cold-water corals to surface productivity. Final CoralFISH meeting, Galway, Ireland, 27-31 August and Final HERMIONE meeting, Carvoeiro, Portugal, 10-14 September.
206. Soetaert, K., Sommer, S., van Oevelen, D. Impact of Siboglinid worms on the biogeochemistry of the Captain Arutyunov mud volcano in the Gulf of Cadiz. Final HERMIONE meeting, Carvoeiro, Portugal, 10-14 September.
207. Stal, L.J. Diazotrophic microbial mats in extreme environments. Biodesert meeting, Tunis, Tunisia, 7-11 July.
208. Stal, L.J. Marine microbiology. EU-US course on marine bioinformatics. Bremen, Germany, 21-23 June.
209. Stal, L.J. Microbial mats in extreme environments. Biodesert symposium, Hammamet, Tunisia, 15-19 December.
210. Stal, L.J. Microbial mats. Darwin Summer School, NIOZ, Texel, 12 July.
211. Stal, L.J. New insights in nitrogen fixation in cyanobacteria. Symposium on nitrogen fixation. Santiago, Chile, 11-18 January.
212. Stal, L.J. Patrizia Albertano's colorful world. Patrizia Albertano Memorial Symposium, Rome, Italy, 12-14 October.
213. Stal, L.J., Grego, M., Wijnholds, A. Screening microalgae for lipid content and optimization of lipid production. InteSusAI Progress meeting, Olhão, Portugal, 8-11 October.
214. Stal, L.J., Severin, I., Bolhuis, H. Diversity of diazotrophs in cyanobacterial mats. International Symposium on Phototrophic Prokaryotes, Porto, Portugal, 4-11 August.
215. Thieltges, D.W. Biogeographie und Makroökologie von Parasiten. Ichthyoparasitological Symposium, Boiensdorf, Germany, 8 June.
216. Thieltges, D.W. Ecology of marine diseases. 9th Conference of the Dutch Society for Wildlife Health Utrecht, 11 May.
217. Thieltges, D.W. Wie Parasiten Küstenökosysteme beeinflussen - eine Einführung in die ökologische Parasitologie. Seminar BiK-F/University Frankfurt, Frankfurt, Germany, 3 July.
218. Timmermans, K., Hoogstraten, A., de Baar, H.J.W. Morphological and physiological effects in *Proboscia alata* (Bacillariophyceae) grown under different light and CO₂ conditions of the modern Southern Ocean. Int. Diatom Symposium, Ghent, Belgium, 26-31 August.
219. Timmermans, K., Schipper, J., Ruardij, P. A multitrophic approach for North Sea seaweeds. Seaculture Neeltje Jans, 18-19 September.
220. Tjallingii, R., Castañeda, I.S., van der Lubbe, J., Quaijtaal, W., Sangiorgi, F., Dekkers, M.J., Schneider, R.R., Schouten, S., Brummer, G-J. Sedimentary evolution and climate history of Zambezi River sediments since 44 ka Bp. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
221. Toney, J.L., Bendle, J.A., Seki, O., Krishnan, S., Pagani, M., Inglis, G., Pancost, R., Bijl, P.K., Bohaty, S., Schouten, S., Pross, J., Brinkhuis, H., Roehl, U., Jamieson, S., the IODP Expedition 318 Team. Insights into peatland expansion and methane cycling on the East Antarctic continent in the early Eocene. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
222. van Aken, H.M. Hydrographic variability of ISOW. ICES-WGOH workshop, Copenhagen, Denmark, 21 March.
223. van Aken, H.M. Hydrographic variability of DSOW, ICES-WKREDOCE2 workshop, Copenhagen, Denmark, 23 March.

224. van Aken, H.M. The thermohaline variability of overflow waters in the northern North Atlantic Ocean. THOR WP3 workshop, NIOZ, Texel, 8 May and North Atlantic symposium, KNMI, De Bilt, 15 May.
225. van Avesaath, P., Hummel, H. The European Marine Biodiversity Observatory System (EMBOS). International Marine And Sub-Marine Infrastructures Symposium, Toulon, France, 13-15 November.
226. van de Koppel, J. Spatial self-organization of intertidal systems. Invited presentation, Roosevelt academy, Middelburg, 2 April.
227. van de Koppel, J. From Math to Mussels. A story of spatial self-organization in ecology. Almende, Rotterdam, 7 September.
228. van de Koppel, J. Empirical evidence for early warning signals in spatially patterned ecosystems. Royal Dutch Academy of Arts and Sciences (KNAW) Colloquium 'Early-warning signals for critical transitions: bridging the gap between theory and practice', Amsterdam, 10 October.
229. van de Koppel, J., Bouma, T., Herman, P. Do Local Interactions or the Landscape Determine Spatial Self-organization in Wetland Ecosystems? Intecol Wetlands Ecology, international meeting, Orlando, Florida, USA, 6 June.
230. van de Koppel, J., de Jager, M., Bartumeus, F., Weissing, F., Kölzsch, A., Hengeveld, G., Nolet, B.A., Herman, P.J.M. Darwin or Einstein; Who is making them move... Annual Meeting of the Ecological Society of America, Portland, OR, USA, 9 August.
231. van de Koppel, J., Silliman, B.R. Spatial self-organization; a tale of pretty patterns? CEES lecture at the University of Groningen, Groningen, 8 May.
232. van de Koppel, J., van der Heide, T., Kangeri, A. Abiotic and biotics interactively structure mussel beds in the Wadden Sea. Mosselworkshop within the 13th International Wadden Sea Symposium, Leeuwarden, 19 November.
233. van den Heuvel-Greve, M., Baptist, M., Philippart, C.J.M., Asjes, J., Blaas, M., Laane, R. Zicht op zee - Nederlandse monitoring op de Noordzee. Noordzeedagen, Egmond aan Zee, 4 October.
234. van der Hout, C.M., Witbaard, R., Duineveld, G., Groot, L., Bergman, M. Variability of suspended particulate matter composition at Egmond, The Netherlands. Presentation at PIE 2012 (particles in Europe), Barcelona, 17-19 October.
235. van der Meer, J. The assumptions of the standard Dynamic Energy Budget (DEB) model. 15th Biennial Benthic Workshop, St. Andrews, Canada, 7-9 November.
236. van der Meer, J. The consequences of the assumptions of the standard Dynamic Energy Budget (DEB) model in terms of growth, reproduction and reserve dynamics. 15th Biennial Benthic Workshop, St. Andrews, Canada, 7-9 November.
237. van der Meer, J., Troost, K., van Stralen, M. Survival and growth of musselbeds in the Dutch Wadden Sea. Mussel workshop Rijke Waddenzee, Leeuwarden, 19-20 November.
238. van der Meer, M.T.J., Chivall, D., M'Boule, D., Kasper, S., Zahn, R., Schouten, S., Sinninghe Damsté, J.S. δD of alkenones as proxy for paleo sea surface salinity. Invited speaker at a mini symposium, Utrecht, 18 October.
239. van der Meer, M.T.J., M'Boule, D., Chivall, D., Kasper, S., Schouten, S., Sinninghe Damsté, J.S. Developing new methods to estimate paleosalinity; understanding the past as key to future climate change. Invited speaker for the Royal Netherlands Meteorological Institute (KNMI) colloquium, De Bilt, 1 November.
240. van der Wal, D. Effects of shellfish beds on microphytobenthos: a remote sensing approach. Mussel Meeting (University of Groningen and NIOZ Yerseke), Groningen, 30 August.

241. van der Wal, D. Physical-biological interactions structuring estuarine ecosystems. Wadden Sea Meeting NIOZ Texel, 13 February.
242. van der Wal, D., Wielemaker-van den Dool, A., Herman, P.M.J. Structuring and functioning of intertidal benthic biota unraveled with remote sensing. ECSA, Venice, Italy, 3-6 June.
243. van der Zee, E.M. Ecosystem engineers as a fundament for coastal ecosystems. Guest lecture HAS Hogeschool, Den Bosch, 29 October and Van Hall - Larenstein, Leeuwarden, 30 November.
244. van der Zee, E.M., van der Heide, T., Donadi, S., Eklöf, J.S., Eriksson, B.K., van der Veer, H.W., Olf, H., Piersma, T. Spatially extended habitat modification by intertidal reef-building bivalves has implications for consumer-resource interactions. Benthic Ecology Meeting, Norfolk, Virginia, USA, 21-24 March.
245. van der Zee, E.M., van der Heide, T., Donadi, S., Eklöf, J.S., Eriksson, B.K., van der Veer, H.W., Olf, H., Piersma, T. The importance of ecosystem engineers for the conservation of intertidal soft-sediment ecosystems. Annual meeting of the Ecological Society of America, Portland, Oregon, USA, 5-10 August.
246. van der Zee, E.M., van der Heide, T., Donadi, S., Eklöf, J.S., Eriksson, B.K., van der Veer, H.W., Olf, H., Piersma, T. Musselbeds beyond boundaries: long-range effects of musselbeds on their environment. International workshop on mussel-related research in the Wadden Sea, Leeuwarden, 19-20 November.
247. van der Zee, E.M., van der Wal, D., Donadi, S., Nieuwhof, S., Lui, Q-Xi, van der Heide, T., Weerman E.J., Eklöf, J.S. van der Veer, H.W., van de Koppel, J., Eriksson, B.K., Dankers, N., Fey, N., Herman, P.M.J., Piersma, T., Olf, H. Influence of mussel beds on their environment: results of in situ and satellite observations. International workshop on mussel-related research in the Wadden Sea, Leeuwarden, November 19-20.
248. van Haren, H. High resolution oceanography. ASPERA workshop on Deep Ocean Cabled observatories, Amsterdam, 24-25 May.
249. van Haren, H. Measurements of currents. ASPERA workshop on Deep Ocean Cabled observatories, Amsterdam, 24-25 May.
250. van Haren, H. Quantifying internal wave-turbulence above deep ocean topography. Workshop "Nonlinear waves and their stability", Konstanz, Germany, 31 May-2 June.
251. van Haren, J.J.M. The KM3 net project, an introduction. INMARTECH, NIOZ, Texel, 25-28 September.
252. van Heerwaarden, J. Deployment of KM3-net mooring strings. INMARTECH, NIOZ, Texel, 25-28 September.
253. van Haren, H. Internal wave - turbulence above deep ocean topography. Seminaire, École Centrale de Lyon, France, 6 December.
254. van Helmond, N.A., Sluijs, A., Reichert, G.-J., Sinninghe Damsté, J.S., Slomp, C.P., Brinkhuis, H. Intensified hydrologic cycle and increased marine productivity during Oceanic Anoxic Event 2. AGU Fall Meeting, San Francisco, USA, 3-7 December.
255. van Oevelen, D., Cathalot, C., Cox, T., Lavaleye, M., Duineveld, G., Kutti, T., Fosså, J-H., Meysman, F., Soetaert, K. Cold-water coral communities: Hotspots of carbon processing along continental margins. 5th International Symposium on Deep-Sea Corals. Amsterdam, 1-7 April.
256. van Oevelen, D., Cathalot, C., Cox, T., Lavaleye, M., Duineveld, G., Kutti, T., Fosså, J-H., Meysman, F., Soetaert, K. Cold-water coral food webs: A synthesis of biomass, activity and trophic structure. Final CoralFISH meeting, Galway, Ireland, 27-31 August.

257. van Oevelen, D., Woulds, C., Soetaert, K. Insights in faunal feeding strategies in benthic food webs: A compilation of isotope tracer data. Deep-Sea Biology Symposium, Wellington, New Zealand, 3-7 December.
258. van Soelen, E. δD of *terrestrial biomarkers* for the reconstruction of past rainfall in the (sub)tropics. Symposium, Utrecht University, 18 October.
259. van Soelen, E., Wagner-Cremer, F., Sinninghe Damsté, J.S., Reichart, G-J. Tropical cyclone activity recorded in hydrogen isotopes of long chain n-alkenes in a crater swamp in Queensland, Australia. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
260. van Walraven, L., Langenberg, V.T., van der Veer, H.W. Changes in benthic-pelagic coupling by changing predation on meroplanktonic larvae in the Wadden Sea? 47th European Marine Biology Symposium, Arendal, Norway, 3-7 September.
261. Vellekoop, J., Sluijs, A., Smit, J., Schouten, S., Sinninghe Damsté, J.S., Brinkhuis, H. Direct evidence for impact winter following the Cretaceous-Paleogene bolide impact. AGU Fall Meeting, San Francisco, USA, 3-7 December.
262. Vermeersen, B., Stocchi, P., Philippart, C.J.M., Gerkema, T. Implications of Earth deformation, rotation and gravity for regional sea level change. NWO Sea and Coastal Research (ZKO) Symposium, Den Haag, 7-8 November.
263. Vermeersen, L.L.A. Towards full 3D-models for GIA-induced contributions to regional sea level projections, EU ECRA Pilot Workshop on Regional Sea Level Change, Utrecht, 14-15 March.
264. Vermeersen, L.L.A. Postglacial rebound and sea level. Joint Leopoldina Gesellschaft - DFG SPP1257 Symposium „Sea Level“, GFZ, Potsdam, Germany, 20 September.
265. Vermeersen, L.L.A., Stocchi, P., Philippart, K., Gerkema, T. Implications of Earth deformation, rotation and gravity for regional sea level change. ZKO Symposium, Den Haag, 7-8 November.
266. Veuger, B., van Oevelen, D., Middelburg, J.J. Fate of microbial nitrogen, carbon, hydrolysable amino acids, fatty acids, and carbohydrates in sediment. ASLO Aquatic Sciences Meeting, Otsu, Japan, 8-13 July.
267. Villanueva, L. Mining metabolic and biomarker lipid biosynthesis genes from the environment: Next challenge in organic biogeochemistry? Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
268. Villanueva, L. Molecular Geomicrobiology: Next challenge in organic biogeochemistry studies? Geochemistry seminars at Utrecht University, Utrecht, 27 November.
269. Villanueva, L., Buckles, L., Weijers, J.W.H., Verschuren, D., Sinninghe Damsté, J.S. Linking archaeal membrane lipids and gene abundance of Thaumarchaeota and uncultured crenarchaeota in a lake setting. KNVM Microbial Ecology Fall Meeting 2012, Wageningen, 13 December.
270. Wagmaakers, F.F.M. Automatic monitoring of primary production. INMARTECH, NIOZ, Texel, 25-28 September.
271. Weijers, J., Schefuss, E., Kim, J.-H., Sinninghe Damsté, J.S., Schouten, S. Constraints on the sources of branched GDGTs in open ocean sediments: dust transport or in situ production? AGU Fall Meeting, San Francisco, USA, 3-7 December.
272. Weijers, J.W.H., Steinmann, P., Hopmans, E.C., Schouten, S., Sinninghe Damsté, J.S., Testing the potential of bacterial branched tetraether lipids as temperature proxy in peat and immature coal deposits. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.

273. Welsh, J.E., Thieltges, D.W. Disease and Biodiversity Risk: A marine perspective on parasite reduction. The 47th European Marine Biology Symposium, Arendal, Norway, 3 September.
274. Welsh, J.E., Thieltges, D.W. Pathogen dilution effects in the Wadden Sea: How invasive species release natives from pathogen pressure. 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November.
275. Wernand, M.R., Novoa, S. Crowdsourcing technologies for the monitoring of the colour, transparency and fluorescence of the sea. BDigital, Barcelona, Spain, 22-23 October.
276. Werne, J.P., Johnson, T.C., Abbott, A.N., Berke, M.A., Contreras, S., Brown, E.T., Schouten, S., Sinninghe Damsté, J.S. A 1.2 Ma history of temperature and hydroclimate in the Lake Malawi basin. GSA meeting, Charlotte, USA, 4-7 November.
277. Wijnhoven, S. Uitwerken en analyseren aangeleverde data tbv 'Flora & Fauna'. Presentatie in het kader van de T2009 Schelde-estuarium. Project- en begeleidingsteam bijeenkomst, Bergen op Zoom, 11 September.
278. Wijnhoven, S. Voortgang 'Flora & Fauna' en 'Ecologisch Functioneren'. Presentatie in het kader van de T2009 Schelde-estuarium. Project- en begeleidingsteam bijeenkomst, Bergen op Zoom, 4 October and 12 November.
279. Wijnhoven, S., Hummel, H. Developments in the benthic communities of the coastal lagoon 'Lake Grevelingen'; Turning the deteriorating trend. 50th ECSA congress, Venice, Italy, 3-7 June.
280. Wijnhoven, S., Kromkamp, J. Ecologisch Functioneren – Resultaten, Knelpunten en Methodiek. Presentatie in het kader van de T2009 Schelde-estuarium. Thematische bijeenkomst, Antwerp, Belgium, 6 December.
281. Wijnhoven, S., van den Brink, A. Competition and niche segregation following the arrival of the exotic brush-clawed shore crab (*Hemigrapsus takanoi*) in the formerly European shore crab (*Carcinus maenas*) dominated Dutch delta. NAEM, Lunteren, 7-8 February.
282. Witbaard, R., Duineveld, G., Bergman, M. Dynamics and growth of *Ensis directus* in the near coastal zone of Egmond, in relation to environmental conditions. Workshop RWS Directie Noordholland, Haarlem, 8 March.
283. Witte, Y. NIOZ Piston corer system improvements. INMARTECH, NIOZ, Texel, 25-28 September.
284. Wuis, L. NIOZ Mooring design and innovation. INMARTECH, NIOZ, Texel, 25-28 September.

Poster presentations 2012

1. Aydin, R., Peterse, F., Schouten, S., Sinninghe Damsté, J.S., Smidt, H., Stams, A.J.M. The microbial community structure of soil samples enriched with methanol at different pH and temperature. ISME 14, Copenhagen, Denmark, 19-24 August.
2. Bale, N., Hopmans, E.C., Villanueva, L., Schouten, S., Sinninghe Damsté, J.S. Seasonal and spatial changes in the distribution of intact polar lipids associated with nitrogen cycling microorganisms in the North Sea. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
3. Besseling, M., Rampen, S.W., Sinninghe Damsté, J.S., Villanueva, L. Abundance and diversity of lipid biomarker-producing algae in Icelandic waters. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
4. Blaga, C.I., de Leeuw, J.W., Verschuren, D., Sinninghe Damsté, J.W. A full lipid biomarker based record from Lake Challa, Tanzania. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
5. Bolhuis, H., Stal, L. Microbial diversity in coastal microbial mats. The 14th International Symposium on Microbial Ecology, ISME14, Copenhagen, Denmark, from 19-24 August 2012.
6. Brenner, H., Braeckman, U., Meysman, F. Benthic alkalinity generation and its implications for the pH dynamics and acidification of the North Sea. Final Meeting EPOCA, Villefranche-Sur-Mer, France, 2-5 May and Planet Under Pressure, London, England, 25-29 May.
7. Buckles, L., Weijers, J.W.H., Verschuren, D., Villanueva, L., Sinninghe Damsté, J.S. In-situ production of GDGTs in Lake Challa, East Africa: challenges facing the lacustrine application of the MBT/CBT palaeothermometer. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
8. Burdorf, L., De Laender, F., Mamouridis, V., Roessink, I., van den Brink, P.J., Soetaert, K.E.R. The effect of biodiversity on the stability of a system – a study combining a quantified niche model with ecotoxicological data, Web of Life conference, Montpellier, France, 5 June.
9. Cadée, G.C. Irregular holes in beached shells produced by aeolian sandblasting. 56th Annual Meeting Palaeontological Association, Dublin, 16-18 December.
10. Chivall, D., M'Boule, D., Schouten, S., Sinninghe Damsté, J.S., van der Meer, M.T.J. Salinity-dependent hydrogen isotope fractionation between growth water and alkenones in oceanic and coastal haptophytes. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
11. Dale, A., Haffert, L., Hütten, E., Crutchley, G., Greinert, J., de Haas, H., de Stigter, H., Bialas, J. Geochemical processes and fluxes at a methane gas chimney on the Hikurangi Margin (New Zealand). EGU General Assembly 2012, Vienna, Austria, 22-27 April.
12. de Bruin, T.F. Recent Advances in Promoting and Curating the Vital Data Legacy of Antarctic Research. IPY2012 Conference - From Knowledge to Action, Montreal, Canada, 22-27 April.
13. de Bruin, T.F. The role of SCADM in promoting and curating the vital data legacy of antarctic science. SCAR 2012 Open Science Conference, Portland, Oregon, USA, 16-19 July.
14. de Bruin, T.F. Find and use marine data at www.nodc.nl. Noordzeedagen 2012, Egmond aan Zee, 4-5 October.

15. de Haas, H., Greinert, J., Urban, P., van Gaever, P. Listen to the bubbles, see the bubbles, catch the bubbles: Methane seepage in the North Sea. Nederlands Aardwetenschappelijk Congres 11, Veldhoven, 29-30 March.
16. de Haas, H., Mienis, F., van Weering, T.C.E., de Stigter, H., van der Land, C., Tokarev, M., Ivanov, M., Gorban, A. Under the skin: the internal structure of coldwater coral reefs; Pen Duick Escarpment compared to Rockall Trough. 5th International Symposium on Deep-Sea Corals, Amsterdam, 2-7 April.
17. de Jager, M., Kölzsch, A., Bartumeus, F., Hengeveld, G., Nolet, B.A., Herman, P.M.J., van de Koppel, J. Collisions drive Brownian motion in self-organized mussel beds. NAEM, Lunteren, 7-8 February.
18. de Jonge, C., Stadnitskaia, A., Charkashov, G., Fedotov, A., Vasiliev, A., Sinninghe Damsté, J.S. Tracing the transport of terrestrial soil membrane lipids in a major river (Yenisei, Russia) and its interaction with the marine system (Kara Sea). Gordon Research Seminar on Organic Geochemistry, Plymouth, New Hampshire, USA, 28 July and Gordon Research Conference on Organic Geochemistry, Plymouth, New Hampshire, USA, 29 July-3 August.
19. de Kluijver, A., Soetaert, K., Czerny, J., Schulz, K.G., Boxhammer, T., Riebesell, U., Middelburg, J.J. A ¹³C labeling study of carbon fluxes in Arctic plankton communities under elevated CO₂ levels. ASLO, Salt Lake City, Utah, USA, 19-24 February.
20. de Nooijer, L.J., van Dijk, I.E.Y., Holbourn, A., Toyofuku, T., Sluijs, A., Reichart, G.J. Seawater Mg/Ca variability during the MMCO. AGU Fall meeting, San Francisco, USA, 3-7 December.
21. de Steur, L., Hansen, E., Mauritzen, C., Beszczynska-Möller, A. Variability in the East Greenland Current in Fram Strait: 1997-2009. 2012 Ocean Sciences Meeting, Salt Lake City, USA, 19-24 February.
22. de Stigter, H.C., Duineveld, G.C.A., Lavaleye, M.S.S., van Weering, T.C.E. Recent sediment transport in Whittard Canyon: not just down slope. Deep-Sea and Sub-Seafloor Frontier Conference, Sitges, Spain, 12-14 March.
23. de Vries, J.J., van Aken, H.M., Ridderinkhof, H. Spatial variability of tidal dynamics in the Marsdiep, NL, Physics of Estuaries and Coastal Seas conference, New York, USA, 12-16 August.
24. de Vries, J.J., van Aken, H.M., Ridderinkhof, H. Observations on the spatial and temporal variability of tidal currents in the Marsdiep, International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November.
25. Dias, C., Campos, J., Luttikhuisen, P.C. Parasitology of the brown shrimp *Crangon crangon* Linnaeus, 1758. IJUP'12, Porto University, Portugal, 22-24 February.
26. Eisele, M., Titschack, J., Mienis, F., Wienberg, C., Frank, N., Hebbeln, D., Freiwald, A. Small-scale sediment accumulation dynamics within a cold-water coral mound – a case study from the Mauritanian margin. 5th International Symposium on Deep-Sea Corals, Amsterdam, 2-7 April.
27. Fan, H., Bale, N., Stal, L.J. The nitrogen cycle in marine microbial mats. ZKO symposium, Den Haag, 7-8 November.
28. Ferreira, L., Campos, J., Luttikhuisen, P.C. Phylogeny of the genus *Crangon* Fabricius, 1798. IJUP'12, Porto, Portugal, 22-24 February.
29. Funcke, A., Langer, G., de Nooijer, L.J., Bijma, J., Reichart, G.J. A culture study with benthic foraminifers at different [Mg²⁺]: Implications for biomineralization and proxies. AGU Fall meeting, San Francisco, USA, 3-7 December.
30. Gallego-Torres, D., Romero, O., Martinez-Ruiz, F., Kim, J.-H., Donner, B., Ortega-Huertas, M. Evolution of deep-water redox conditions in the NW African upwelling system

during the last glacial and deglaciation: implications for the deep ocean circulation. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.

31. Goedknecht, A., Camphuysen, K., Luttikhuisen, P., Wegner, M., Buschbaum, C., Nauta, R., Schuster, A., Reise, K., van der Meer, J., Thielges, D. Effects of invasive species on native predator-prey and pathogen-host webs. A new project in the call on bilateral Wadden Sea Research. 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November.
32. Goedknecht, A., Thielges, D. Biodiversity reduces disease risk in a warmer sea. Netherlands Annual Ecology Meeting, Lunteren, 7-8 February and the 47th European Marine Biology Symposium, Arendal, Norway, 3-7 September.
33. Grosse, J., Boschker, H.T.S. Assessing resource limitation in North Sea phytoplankton based on amino acid and fatty acid synthesis. NWO-ZKO symposium, Den Haag, 7-8 November.
34. Grosse, J., Boschker, H.T.S. Shift in nutrient limitation affects biochemical composition of North Sea phytoplankton. Ocean Science Meeting 2012, Salt Lake City, UT, USA, 20-24 February.
35. Hardison, A., Hopmans, E., Giblin, A., Rich, J. Dynamics of anoxic nitrogen cycling pathways and anammox-specific biomarkers in an experimental marine sediment system. ISME 14, Copenhagen, Denmark, 19-24 August.
- 36.** Hörnlein, C., Boschker, K.T.H., Stal, L., Bolhuis, H. Rhythm on the beach. Metabolic pathways in coastal microbial mats. Microbial Communication Conference, Jena, Germany, 5-8 November.
37. Hummel, C.A., van Avesaath, P.H., Hummel, H. Estuary becomes tidal bay: What happens? European Marine Biology Symposium, Arendal, Norway, 3-7 September.
38. Hummel, H., van Avesaath, P. Development and implementation of a pan-European Marine Biodiversity Observatory System (EMBOS). ESF-COST Domain Committee meeting, Alexandroupolis, Greece, 19-22 June.
39. Hunter, W., van Oevelen, D., Witte, U. Oxygen Minimum Zone influences carbon flows through deep-sea sediment ecosystems: a modelling study. Deep-Sea Biology Symposium, Wellington, New Zealand, 3-7 December.
40. Jouta, J., Piersma, T., Bakker, S. Spoonbills as indicator of the Wadden Sea condition, a study with stable $\delta^{13}\text{C}$ & $\delta^{15}\text{N}$ isotope analysis. Waddenacademie, Leeuwarden, 21-23 November.
41. Jouta, J., Piersma, T., van der Veer, H. Food web structures in a differentiated intertidal ecosystem using $\delta^{13}\text{C}$ & $\delta^{15}\text{N}$ values as indicators. NAEM congress, Lunteren, 7-8 February.
42. Jung, M.-Y., Kim, J.-G., Park, S.-J., Sinninghe Damsté, J.S., Madsen, E., Rhee, S.-K. Enrichment and characterization of autotrophic ammonia-oxidizing thaumarchaea from an agricultural soil. ISME 14, Copenhagen, Denmark, 19-24 August.
43. Jung, S., Schückel, U., de la Vega, C., Asmus, H., Asmus, R., Kröncke, I., Philippart, C.J.M., van der Veer, H.W. The impact of biological invasions on the Wadden Sea food web (INFOWEB). The 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November.
44. Kasper, S., van der Meer, M.T.J., Brummer, G.-J., Zahn, R., Schouten, S. Stable hydrogen isotope composition of C_{37} alkenones as indicator for salinity changes in the Agulhas leakage area during Termination I and II. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August and Chapman Conference on the Agulhas system, Stellenbosch, Western Cape, South Africa, 8-12 October.

45. Koch, S., Dumke, I., Bialas, J., Crutchley, G., Greinert, J., Klaschen, D., Klaucke, I., Papenberg, C. Multiscale image of a seep structure - Takahe, Offshore New Zealand. EGU General Assembly 2012, Vienna, Austria, 22-27 April.
46. Kool, D.M., Rijpstra, W.I.C., Zhu, B., Ettwig, K.F., Jetten, M.S.M., Sinninghe Damsté, J.S. Lipid biomarker potential for a nitrite-dependent, intra-aerobic methane oxidizer. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
47. Kromkamp, J., Silsbe, G., Philippart, K. Are there spatial and tidal differences in photosynthetic performance in the Waddensea? An FRRF study. ZKO symposium, Den Haag, 7-8 November.
48. Krossa, V.R., Kim, J.-H., Moros, M., Dörfler, W., Blanz, T., Sinninghe Damsté, J.S., Schneider, R. Mid Holocene climate change and impact on evolution on human settlements in northern central Europe. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
49. Krossa, V.R., Kim, J.-H., Moros, M., Dörfler, W., Blanz, T., Sinninghe Damsté, J.S., Schneider, R. Marine-continental climate link during the Mid Holocene in northern central Europe. GV and SEDIMENT meeting 2012, Hamburg, Germany, 23-28 September.
50. Lavaleye, M.S.S., Jeffreys, R.M., Duineveld, G.C.A., Bergman, M.J.N., Witbaard, R. Fish and megafauna: suitable indicators of natural and man-made disturbances in the deep-sea? Deep-sea and Subfloor Conference, Sitges, Spain, 11-14 March .
51. Le Guitton, M., Middelburg, J.J., Sinninghe Damsté, J.S., Soetaert, K. Seasonal study of particulate organic matter degradation state in the southern North Sea. ZKO Symposium, Den Haag, 7-8 November.
52. Lengger, S., de Haas, H., Sinninghe Damsté, J.S., Schouten, S. Investigations on the metabolism of sedimentary *Thaumarchaeota* by stable isotope probing. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
53. Linley, T., Bergman, M., Capezzuto, F., Cousins, N., D'Onghia, G., Duineveld, G., Lavaleye, M., Maiorano, P., Priede, I., Shields, M., Sion, L., Tursi, A. A review of the baited lander systems within the CoralFISH project. Annual Meeting EU-CoralFISH, Galway, Ireland, 27 August-1 September.
54. Lipsewers, Y.A., Bale, N., Schouten, S., Sinninghe Damsté, J.S., Villanueva, L. Relevance of chemoautotrophy in the oxygen transition zone of marine sediments. Darwin Days 2012, Veldhoven, 28-29 March.
55. Ly, J. P limitation in primary producers. ZKO symposium, Den Haag, 7-8 November.
56. Maat, D.S., Brussaard, C.P.D. High algal virus impact despite phosphate limitation. ISME meeting, Copenhagen, Denmark, 19-24 August.
57. Maat, D.S., Crawford, K.J., Timmermans, K.R., Brussaard, C.P.D. Virus-algal host interactions in the future ocean. Viruses of Microbes conference, Brussels, Belgium, 16-20 July.
58. Matos, L., Mienis, F., Frank, N., Thil, F., Wienberg, C., Hebbeln, D. Corals deep under the stream: how the Gulf Stream is driving the interglacial occurrence of cold-water corals off Cape Lookout, NC. AGU Fall meeting, San Francisco, USA, 3-7 December.
59. Matos, L., Mienis, F., Frank, N., Wienberg, C., Abrantes, F., Cunha, M., Hebbeln, D. NW-Atlantic temporal distribution of cold-water corals: a first case study from Cape Lookout area, North Carolina. GV & Sediment Meeting, Hamburg, Germany, 23-28 September.
60. Mienis, F., Pedersen, A., Duineveld, G., Seidenkrantz, M.-S., Fischel, A., Matos, L., Bane, J., Frank, N., Hebbeln, D., Ross, S.W. Present and past Gulf Stream variability in a cold-water coral area off Cape Lookout, West Atlantic. AGU Fall meeting, San Francisco, USA, 3-7 December.

61. Mojica, K.D.A., Brussaard, C.P.D. Enhanced stratification impacts marine food web C-flux. ISME14, Copenhagen, Denmark, 19-24 August.
62. Moneta, A., Veuger, B., van Rijswijk, P., Meysman, F., Soetaert, K., Middelburg, J.J. Dissolved inorganic and organic nitrogen and carbon uptake in tidal inlet waters: a seasonal study. ZKO symposium 2012, Den Haag, 7-8 November.
63. Moore, E., Rijpstra, W.I.C., Hopmans, E.C. Villanueva, L., Dedysh, S.N., Wienk, H., Sinninghe Damsté, J.S. Amino acid containing intact polar lipids: Biomarker potential for environmental stress response. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
64. Moore, E., Rijpstra, W.I.C., Hopmans, E.C., Villanueva, L., Dedysh, S.N., Sinninghe Damsté, J.S. Known and unknown amino acid containing intact polar lipids: Biomarker potential for organic matter remineralization. Darwin Days 2012, Veldhoven, 28-29 March.
65. Mulder, L.L., Epping, E.H., Philippart, J.C., Soetaert, K. Metabolism and nutrient fluxes of an intertidal flat in the western Wadden Sea. ASLO Aquatic Science Meeting, Otsu, Japan, 8-13 July.
66. Mulder, L.L., Philippart, C.J.M., Soetaert, K. Identifying key drivers of intra annual DIP concentration in the western Wadden Sea: importance of intertidal flats. 13th International Scientific Wadden Sea Symposium, 21-23 November.
67. Mulder, L.L., Philippart, C.J.M., Kromkamp, J.C., Meysman, F.J.R., Soetaert, K.E.R. The fate of P in the intertidal. The 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November and NWO Sea and Coastal Research (ZKO) Symposium. Den Haag, 7-8 November.
68. Mulder, L.L., Philippart, C.J.M., Meysman, F., Soetaert, K. The effect of benthic primary production on the nutrient exchange between the sediment-water interface: a modeling approach. ZKO symposium, Den Haag, 7-8 November. .
69. Nauw, J., Merckelbach, L., Ridderinkhof, H., van Aken, H. Long-term observations of the SPM transport through the Texel inlet using ferry-based ADCP measurements. PECS, New York, USA, 13-17 August.
70. Nauw, J., Ruardij, P., Gerla, D., Brinkman, B. Wadden Sea ecosystem modelling: What have we achieved so far? ZKO symposium, Den Haag, 7-8 November.
71. Nierop, K., Reichart, G-J., Sinninghe Damsté, J.S. Preservation and degradation of lipid biomarkers in surface sediments across a bottom water oxygen gradient in the Arabian Sea. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
72. O'Connor, P.F., Brussaard, C.P.D. Phytoplankton mortality due to both viral lysis and microzooplankton over two summer cruises. ZKO Symposium 2012, Den Haag, 7-8 November.
73. Pedersen, A., Mienis, F., Seidenkrantz, M.-S., Fischel, A., Frank, N., Hebbeln, D. Gulf Stream variability at Cape Lookout, North Carolina. 5th International Symposium on Deep-Sea Corals, Amsterdam, 2-7 April.
74. Pedersen, A., Seidenkrantz, M.-S., Mienis, F., Fischel, A., Frank, N., Hebbeln, D. Gulf Stream variability in western North Atlantic off Cape Lookout, North Carolina. EGU General Assembly 2012, Vienna, Austria, 22-27 April.
75. Philippart, C.J.M., van Aken, H.M., van Dijk, M.A., Kromkamp, J.C., Salama, M.S., Wernand, M.R., van der Woerd, H.J. Integrated Network for Production and Loss Assessment in the Coastal Environment (IN PLACE). NWO Sea and Coastal Research (ZKO) Symposium, Den Haag, 7-8 November.

76. Rabitti, A., Maas, L.R.M. Wave ray dynamics of rotating spherical fluid domains. European Geosciences Union General Assembly, Vienna, Austria, 22-27 April.
77. Rabitti, A., van Haren, H., Gerkema, T., Maas, L.R.M. On the West Atlantic Ocean equatorial boundary layer. European Geosciences Union General Assembly Vienna, Austria, 22-27 April.
78. Rakhimberdiev, E., van den Hout, P.J., Spaans, B., Kleefstra, R., Piersma, T. Modern techniques in survival analyses uncover hidden population declines in Red Knot. 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November.
79. Rampen, S.W., Sinninghe Damsté, J.S., Schouten, S., Middelburg, J.J. Investigation of carbon uptake in the deep-sea with the use of lipid biomarkers. AGU Fall Meeting, San Francisco, USA, 3-7 December.
80. Reichart, G.-J., Wit, J.C., de Lange, G.J., de Nooijer, L.J. Sea surface conditions during deposition of Mediterranean sapropel S5. AGU Fall meeting, San Francisco, USA, 3-7 December.
81. Ribó, M., van Haren, H., Puig, P. Analysis of the presence of internal waves on the Gulf of Valencia continental slope and their role with sediment transport. HERMIONE Annual meeting 2012, Faro, Portugal, 11-14 September.
82. Ribó, M., van Haren, H., Puig, P. Analysis of the presence of internal waves on the Gulf of Valencia continental slope and their role with sediment transport. Theme 3: Episodic Events, Hermione annual meeting, Vigo, Spain, 23-27 September.
83. Ribó, M., van Haren, H., Puig, P. Measurements for the analysis of the presence of internal waves on the Gulf of Valencia continental slope and their role with sediment transport. 3rd Particle in Europe (PiE) conference, Barcelona, Spain, 17-19 October.
84. Rodrigo-Gámiz, M., Rampen, S.W., Schouten, S., Sinninghe Damsté, J.S. Testing organic temperature proxies in sub-Polar regions (Iceland). Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
85. Rush, D., Jaeschke, A., Geenevasen, J.A.J., Schouten, S., Sinninghe Damsté, J.S. Thermally stable anammox biomarker lipids produced during hydrous pyrolysis. Darwin Days 2012, Veldhoven, 28-29 March.
86. Salama, M.S., van der Velde, van der Woerd, H.J., Kromkamp, J.C., Philippart, C.J.M., Joseph, A.T., O'Neill, P.E., Lang, R.H., Gish, T., Werdell, P.J., Su, Z. GeoCalVal: calibration and validation of geophysical observation models. Ocean Optics Conference, Glasgow, Scotland, 8-12 October.
87. Salzmann, U., Sangiorgi, F., Bijl, P.K., Pross, J., Schouten, S., Tauxe, L., Bendle, J., Brinkhuis, H., Escutia, C., IODP Expedition 318 Science Party. Early to Middle Miocene vegetation and climate of Wilkes Land, Antarctica (IODP 318). European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
88. Sauder, L., Peterse, F., Schouten, S., Neufeld, J.D. Low-ammonia niche of ammonia-oxidizing archaea in a municipal wastewater treatment plant. ISME 14, Copenhagen, Denmark, 19-24 August.
89. Seitaj, D., Gambari, F., Malkin, S., Slomp, C., Meysman, F. Sulphide oxidation in hypoxic sediments: two competing microbial processes. Darwin Days 2012, Veldhoven, 28-29 March.
90. Sheik, A.R., Musat, N., Lavik, G., Vagner, T., Brussaard, C.P.D., Kuypers, M.M.M. The effect of viruses on phytoplankton and prokaryotic nutrient assimilation: A single cell approach. ISME14, Copenhagen, Denmark, 19-24 August.
91. Sinninghe Damsté, J.S., Kim, J.-H., Zell, C., de Jonge, C., Stadnitskaia, A., Warden, L., Hopmans, E.C., Schouten, S. The transport of branched GDGTs by rivers: Implications for

continental palaeothermometry. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.

92. Smeulders, G., de Stigter, H., Koho, K., Mienis, F., de Haas, H., van Weering, T. Recent benthic foraminifera from cold-water coral substrates of Rockall and Porcupine Bank, NE Atlantic Ocean. 5th International Symposium on Deep-Sea Corals, Amsterdam, 2-7 April.
93. Stadnitskaia, A., Liebetrau, V., Eisenhauer, A., Sinninghe Damsté, J.S. Past methane seepage and linked deep-water anoxia are logged in methane-derived carbonates. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
94. Stal, L.J., Bolhuis, H., Severin, I. Ecology of coastal cyanobacterial mats. ISPP 2012, 14th International Symposium on Phototrophic Prokaryotes, Porto, Portugal, 5-10 August.
95. Steinhardt, J., Boender, A., Fallet, U., Brummer, G.-J. Seasonal planktonic foraminifera assemblage changes in the Mozambique Channel, TMS Foraminifera and Nannofossil Groups Joint Annual Meeting 2012, Edinburgh, UK, 21-23 June.
96. Steinhardt, J., Fallet, U., Tjallingii, R., Brummer, G.-J. Core top particle component analysis from the southwestern Indian Ocean. EGU General Assembly 2012, Vienna, Austria, 22-27 April.
97. Steinhardt, J., Reichart, G.-J., Brummer, G.-J. Seasonal planktonic foraminifera assemblage changes in the Mozambique Channel. AGU Chapman Conference on the Agulhas System and its Role in Changing Ocean Circulation, Climate, and Marine Ecosystems, Stellenbosch, South Africa, 8-12 October.
98. Stuut, J.-B.W., van der Does, M., Fischer, G. Saharan dust from a marine perspective: sediment-trap time series off Mauritania. AGU Fall meeting, San Francisco, USA, 3-7 December.
99. Temmesfeld, F., Stuut, J.-B., De Deckker, P. Late Quaternary aridity changes on three austral continents: inferences from the marine sediment archive. Nederlands Aardwetenschappelijk Congres 11, Veldhoven, 29-30 March.
100. Timmermans, K. van de Poll, W. Mojica, K., van der Woerd, H., Brussaard, C. Effects of simulated enhanced or reduced mixing on phytoplankton from the NorthEast Atlantic. ZKO Symposium 2012, Den Haag, 7-8 November.
101. Uliana, E., Kim, J.-H., Fischer, G., Hefter, J., Romero, O., Basse, A., Versteegh, G.J.M., Mollenhauer, G., Schefuß, E. Diol-based SST-proxies in NW African upwelling: sediment trap, surface waters and sediment records. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
102. van Avesaath, P., Hummel, H. The invasion of an artificial lagoon (Lake Veere, The Netherlands) by the jelly *Mnemiopsis leidyi*: a guest that permanently settled in the deeper parts of the system? 47th European Marine Biology Symposium (EMBS), Arendal, Norway, 3-7 September.
103. van der Ent, E., Mueller B., Mulders, Y., Sangiorgi, F., van Duyl, F.C. Bioerosion rates of excavating sponges on Caribbean coral reefs. Youmares 3, Luebeck, Germany, 12-14 September.
104. van der Zee, E.M., van der Heide, T., Donadi, S., Eklöf, J.S., Eriksson, B.K., van der Veer, H.W., Olff, H., Piersma, T. Spatially extended habitat modification by intertidal reef-building bivalves has implications for consumer-resource interactions. International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November and ZKO (NWO- Zee en Kust Onderzoek) Symposium, Den Haag, 7-8 November.
105. van Haren, H., Gostiaux, L. Detailed internal waves mixing above a deep-ocean slope. Ocean Sciences Meeting 2012, Salt Lake City, USA, 20-24 February.

106. van Haren, H., Gostiaux, L. Great Meteor Seamount revisited: detailed internal wave-turbulence. European Geosciences Union, General Assembly 2012, Wien, Austria, 23-27 April.
107. van Walraven, L., Langenberg, V.T., van der Veer, H.W. The pelagic Wadden Sea: who eats who and when? ZKO Symposium, Den Haag, 7-8 November.
108. van Walraven, L., van Harten, M., van Looijengoed, W., Langenberg, V.T., van der Veer, H.W. The invasive ctenophore *Mnemiopsis leidyi* in Dutch waters. Annual Ecology Meeting Lunteren, 7-8 February.
109. Veenstra, T., Schouten, S., Dickens, G., Backman, J., Sluijs, A. Late Miocene - early Pliocene productivity, temperature and upwelling in the eastern Equatorial Pacific. 13th International Palynological Congress and 9th International Organization of Palaeobotany Conference, Tokyo, Japan, 23-30 August.
110. Veloso, M., Mienert, J., Batist, M.D., Greinert, J. Analysis of the spatial and temporal variability of seep occurrences and activity offshore W-Spitzbergen. EGU General Assembly 2012, Vienna, Austria, 22-27 April.
111. Villanueva, L., Bale, N., Lipsewers, Y., Pitcher, A., Buckles, L., Weijers, J., Hopmans, E.C., Schouten, S., Sinninghe Damsté, J.S. Intact polar lipids and gene expression to trace archaeal populations in the environment. ISME 14, Copenhagen, Denmark, 19-24 August.
112. Warden, L., Rybczynski, N., Ballantyne, A., Mets, A., Sinninghe Damsté, J.S. Exploring continental climate variations during the Pliocene using the MBT/CBT proxy. 11th Nederlands Aardwetenschappelijk Congres (NAC 11), Veldhoven, 29-30 March.
113. Weijers, J.W.H., Schefuss, E., Kim, J.-H., Sinninghe Damsté, J.S., Schouten, S. Constraints on the sources of branched tetraether membrane lipids in open ocean sediments. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
114. Weijers, J.W.H., Steinmann, P., Hopmans, E.C., Basiliko, N., Finkelstein, S.A., Johnson, K.R., Schouten, S., Sinninghe Damsté, J.S. Testing the potential of bacterial branched tetraether membrane lipids as temperature proxy in peat and immature coal deposits. European Geosciences Union, General Assembly 2012, Vienna, Austria, 22-27 April.
115. Welsh, J.E., Thielges, D.W. Pathogen dilution effects in the Wadden Sea: How invasive species release natives from pathogen pressure. Netherlands Annual Ecology Meeting, Lunteren, 7 February and 13th International Scientific Wadden Sea Symposium, Leeuwarden, 21-23 November.
116. Wernand, M.R., Ceccaroni, L., Piera, J., Zielinski, O. Crowdsourcing technologies for the monitoring of the colour, transparency and fluorescence of the sea. Ocean Optics XXI Conference, Glasgow, Scotland, 8-12 October.
117. Witbaard, R., Bergman, M., Duineveld, G., Lavaleye, M. Dredged megafauna of the dutch continental shelf. Distribution and densities of "rarer" species. Noordzeedagen, Egmond, 4-5 October.
118. Witbaard, R., Duineveld, G., Bergman, M., van der Hout, C. Observatory "Egmond aan Zee" Monitoring valve gape behaviour of *Ensis directus* and *Mytilus edulis* under natural conditions and dredging operations. Noordzeedagen, Egmond, 4-5 October.
119. Zell, C., Kim, J.-H., Godthard, E., Hollander, D., Lorenzoni, L., Moreira-Turcq, P., Abril, G., Baker, P., Silva, C., Sinninghe Damsté, J.S. Sources and distributions of branched tetraether lipids in the Amazon River and the Amazon fan: Implication for the application of the MBT/CBT proxy in marine sediments. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 29 July-3 August.
120. Zhu, Z.C., Bouma, T.J., Ysebaert, T., Herman, P.M.J. Seed arrival and survival of salt marsh pioneer species on the intertidal mudflat: bottlenecks for seedling establishment?

42nd Annual Meeting "From Basic Ecology to the Challenges of Modern Society",
Luneburg, Germany, 14-18 September.

Colloquia

1. 9 January. Julien Michel (Leibniz Center for Marine Tropical Ecology, Bremen, Germany). Carbonate-producing organisms and sedimentation of the Golfe d'Arguin (Mauritania).
2. 12 January. Henk Brinkhuis (NIOZ). From Greenhouse to Icehouse and Back Again; lessons from the geological record.
3. 19 January. Marco van Hulten (KNMI). Aluminium in an ocean general circulation model compared with the West Atlantic Geotraces cruises.
4. 26 January. Nicole Bale (NIOZ, BGC). Tracing nitrogen cycling microorganisms in the North Sea using their intact membrane lipids.
5. 30 January. Anne Osborne (Helmholtz-Zentrum für Ozeanforschung, Kiel, Germany). Neodymium isotopes as a tracer for past ocean circulation – the Pliocene closure of the Central American Seaway.
6. 2 February. Marcel Wernand (NIOZ, FYS). From electric bulb to Ipad - The era of visualized trends in ocean colour and chlorophyll.
7. 16 February. Mardik Leopold (IMARES). Record numbers of porpoises in the Netherlands, dead and alive. Is there a problem?
8. 23 February. David Thieltges (NIOZ, MEE). Ecology of marine diseases.
9. 1 March. Kees Booij (NIOZ, BGC). Passive sampling of organic contaminants: why bother?
10. 8 March. Maarten Loonen (Groningen University). Are geese a key species in arctic ecosystems?
11. 15 March. Fleur van Duyl (NIOZ, BIO). Functional roles of sponges on coral reefs.
12. 22 March. Per Palsboll (Groningen University). Population genetic inference methods in marine ecology.
13. 5 April. Rik Tjallingii (NIOZ, GEO). New developments for calibration and application of XRF core scanning of sediment cores.
14. 12 April. Filip Meysman (NIOZ Yerseke). Electrogenic oxygen consumption in the seafloor: in search for natural microbial batteries.
15. 18 April. Gert-Jan Reichart (Utrecht University). Reconstructing hydrological change in lagoonal and open ocean settings.
16. 19 April. Hubert Vonhof (VU Amsterdam). Combination of radiogenic and stable isotope techniques for improved paleoenvironmental reconstruction.
17. 3 May. Helena L. Filipsson (Lund University, Sweden). Extraordinary high primary productivity off NW Africa during Younger Dryas and its consequences for benthic life.
18. 10 May. Henk Bolhuis (NIOZ, Yerseke). Molecular analysis of coastal microbial mat communities.
19. 24 May. Caroline Slomp (Utrecht University). Phosphorus recycling and burial in low oxygen settings in the Baltic Sea.
20. 31 May. Nienke Bloksma (NIOZ, PR). Escape from the Ivory tower.
21. 4 June. Dedmer van de Waal (Alfred Wegener Institute for Polar and Marine Research, Germany). A sour future for toxic and calcareous dinoflagellates.
22. 6 June. Laura Villanueva (NIOZ, BGC). Molecular Geomicrobiology: Next challenge in

organic biogeochemistry?

23. 14 June. Patrick De Deckker (Australian National University, Canberra, Australia). The role of the Indo Pacific Warm Pool and the Southern Westerlies on Glacial Interhemispheric Asymmetry.
24. 5 July. Leon Claessens (Hollycross University, Worcester, USA). The Dodo in 3-D, reconstructing the life habits of the icon of extinction.
25. 13 July. Jelle Reumer (Utrecht University, Natuurhistorisch Museum Rotterdam). The Peruvian mega-toothed killer whale and the evolution of whales.
26. 19 July. Eva Niedermeyer (BIK-F, SNG, Frankfurt, Germany). Glacial to Holocene dynamics of the Indonesian monsoon - New insights from plant-wax δD off Northwest Sumatra.
27. 26 July. Arnaldo Valle-Levinson (University of Florida). Adjustment to the paradigms of net circulation and diel vertical migrations in fjords.
28. 13 September. Richard Zeebe (University of Hawaii at Manoa) Ocean Acidification: Past, Present, and Future.
29. 17 September. Lennart de Nooijer (Utrecht University). Foraminifer-based proxies: development, biomineralization, and application.
30. 4 October. Maarten Klunder (NIOZ, BIO). Distributions and sources of dissolved iron in the polar oceans.
31. 11 October. Tom Jilbert (Utrecht University). Anoxic sediments as players in marine biogeochemical cycles and recorders of short-term environmental change.
32. 23 October. Caroline Katsman (KNMI). Towards regional projections of twenty-first century sea level change.
33. 8 November. Lara Pozzato (NIOZ Yerseke). Prokaryotic, protozoan and metazoan processing of organic matter in the sediment: a tracer approach.
34. 15 November. Michio Aoyama (Meteorological Research Institute, Japan). One year tracking of ^{134}Cs and ^{137}Cs in the North Pacific Ocean: impact of radiocaesium released from Fukushima Dai-ichi NPP accident.
35. 29 November. Darci Rush (NIOZ, BGC). Ladderanes as tracers for present and past anaerobic ammonium oxidation.
36. 4 December. Brendan Keely (York University, UK). A new dawn for sedimentary tetrapyrroles?
37. 6 December. Raquel Lopes dos Santos (NIOZ, BGC). Late Quaternary paleoenvironmental conditions of NW Africa and SE Australia.
38. 13 December. Daphne van der Wal (NIOZ, Yerseke). Structure and functioning of intertidal benthic biota unravelled with remote sensing.
39. 21 December. Marcel van der Meer (NIOZ, BGC). Developing new methods to estimate paleosalinity; understanding the past as key to future climate change.

External projects 2012

BGC

The nitrogen cycle and changes in the carrying capacity of coastal waters (NICYCLE, Part 1, ZKO, Spinoza).

N. Bale, J.S. Sinninghe Damsté, in cooperation with the NIOO - CEME.

Long term Indian Ocean monsoon dynamics as revealed by a 25-kyr lipid biomarker record of Lake Challa: potential signals of natural climatic change.

L. van Bree, C.I. Blaga, J.W. de Leeuw (PI), J.S. Sinninghe Damsté, in cooperation with the King Saud University and Ghent University.

Passive sampler development for measuring dissolved organics.

K. Booij, in cooperation with the US Geological Survey, the University of Queensland (Australia).

Application of the MBT and TEX₈₆ temperature proxies in lakes (ERC, PACEMAKER-2).

L. Buckles (UU), G.J. Reichart (UU), J.S. Sinninghe Damsté.

How salty was the sea? A crucial question to predict future climate change (NWO - ALW).

D. Chivall, M.T.J. van der Meer, J.S. Sinninghe Damsté (PI).

Compound specific hydrogen isotopes as indicator of core metabolisms of benthic microorganisms in the Wadden Sea.

S. Heinzemann, M.T.J. van der Meer (PI).

Testing a new terrestrial palaeothermometer: Tracing the transport of terrestrial soil membrane lipids through a major river system (Yenisei, Russia) to the Arctic Ocean (NWO - ALW).

C. de Jonge, A. Stadnitskaia, J.S. Sinninghe Damsté (PI).

Development, validation and application of compound specific hydrogen isotope analysis as a tool for reconstructing Agulhas Current paleo sea surface salinity variability (EU Marie Curie Initial Training Network GATEWAYS).

S. Kasper, M.T.J. van der Meer, S. Schouten (PI).

SOURCE - Tracing Amazon soil organic carbon input from land to the ocean (EU).

J-H. Kim, J.S. Sinninghe Damsté.

Tracing the environmental significance of nitrite-driven anaerobic methane oxidation (DARWIN).

D.M. Kool, J.S. Sinninghe Damsté (PI), in cooperation with the Radboud University Nijmegen.

Impact of benthic processes on biogeochemical organic carbon cycling and organic proxy records in marine sediments (DARWIN).

S. Lengger, S. Schouten (PI), J.S. Sinninghe Damsté.

Tracing chemoautotrophic microbes in present and past sedimentary environments (DARWIN).

Y. Lipssewiers, L. Villaneuva (PI).

Biogeochemical cycling of organic matter in coastal marine sediments: Intact polar lipids as tracers for key microbes (DARWIN).

E. Moore, J.S. Sinninghe Damsté (PI), in cooperation with the Wageningen University.

Ladderane and other lipids of anammox bacteria as tracers for present-day and past oceanic nitrogen cycling (DARWIN).

D.J. Rush, J.S. Sinninghe Damsté (PI), in cooperation with the Radboud University Nijmegen.

Sedimentary long-chain, mid-chain diols derived from marine phytoplankton: novel proxies for climate reconstruction (NWO).

M. Rodrigo, J.S. Sinninghe Damsté (PI), S.W. Rampen (UU), G.-J. A. Brummer (GEO), K.R. Timmermans (BIO).

The impact of CO₂ concentrations and pH on marine microbial membrane lipids (DARWIN).
P. Schoon, S. Schouten (PI), J.S. Sinninghe Damsté in cooperation with NIOZ-BIO and NIOZ-Yer.

Lipids as indicators of N-cycling in sub-oxic zones of present and past oceans (DARWIN).
M. Sollai, J.S. Sinninghe Damsté (PI), in cooperation with the Radboud University Nijmegen.

Geobiology of deep-sea cold seep carbonates: biogeochemical interactions and feedback (NWO - Vernieuwingsimpuls, Veni grant).
A. Stadnitskaia.

Waddensleutels (Waddenfonds).
E. Svensson, K. Donkers, J.S. Sinninghe Damsté, S. Schouten, in cooperation with NIOZ-MEE, Groningen University and Utrecht University.

Developing new methods to estimate paleosalinity; understanding the past as key to future climate change (NWO Innovational Research Incentives Scheme VID1).
D. M'Boule, D. Sinke-Schoen, M.T.J. van der Meer (PI).

From hothouse to icehouse: Evolution of Mesozoic and Cenozoic sea water temperatures (NWO - Vernieuwingsimpuls, Vici grant).
R. Lopes dos Santos, J. Ossebaar, S. Schouten (PI).

Assessing Amazon paleohydrological and paleotemperature changes using lipid biomarkers (Amazon-HYDRAULIK, University Brazil).
E. van Soelen, J-H. Kim (PI), J.S. Sinninghe Damsté, in cooperation with University Brasilia.

Quaternary evolution of continental climate as revealed by the MBT/CBT proxies (ERC, PACEMAKER-3).
L. Warden, J.S. Sinninghe Damsté (PI).

Tracing the transport of soil organic matter to the ocean by rivers (ERC, PACEMAKER-1).
C.I. Zell, J-H. Kim, D. Dorhout, J.S. Sinninghe Damsté (PI).

BIO

Antarctic phytoplankton in a changing world and its consequences for the lower pelagic food web (ANTPHIRCO, NWO Polar Program).
T. Biggs, C.P.D. Brussaard.

Anti-fouling experiment (Car Creation, Sintens-Kansenkanon).
L. Peperzak, J.P. Boon.

Archaeal activity dynamics in marine snow vs. ambient water in coastal European Sea (ARCADIA, EU Marie Curie).
K. Timmermans.

Ballastwater treatment filtertest (PecoFacet).
L. Peperzak, J.P. Boon.

Biochemical and ecological effects of resource co-limitation on key phytoplankton species (PHYTURE, NIOZ-Heip-oio).
D. Maat, C.P.D. Brussaard.

Changes in vertical stratification and their impact on phytoplankton communities (STRATIPHYT, NWO Coastal and Marine Research ZKO).

K. Mojica, W. van de Poll, C.P.D. Brussaard, K. Timmermans, in collaboration with UvA, RUG, UU-IMAU and VU-IVM.

Changes in carbon uptake and emissions by oceans in a changing climate (CARBOCHANGE, EU).
H. de Baar.

CO₂ Buffering capacity of the North Sea (NWO-ALW).
L. Salt, H. de Baar.

Consequences of Ocean Acidification for phytoplankton production and losses (Double Trouble, Darwin Center for Biogeosciences).
K. Crawford, C.P.D. Brussaard, in cooperation with Utrecht University and AWI.

Dynamics of acidification in the North Sea: documentation and attribution (ZKO).
N. Clargo, H. de Baar.

European Project on Ocean Acidification (EPOCA, EU).
C.P.D. Brussaard, H. de Baar.

Future of Reefs in a Changing Environment: an ecosystem approach to managing Caribbean coral reefs in the face of climate change (FORCE, EU).
B. Muller, F. van Duyl.

Global change and microbial oceanography in the West Atlantic Ocean (GEOTRACES, NWO-ALW).
H. de Baar.

Global change and microbial oceanography in the West Atlantic Ocean (GEOTRACES, ZKO).
M. Rijkenberg, H. de Baar.

Global change and microbial oceanography in the West Atlantic Ocean, Part C (GEOTRACES, NWO-ALW).
A. Klimiuk, T. Yokokawa, K. Timmermans.

Heterotrophic activity and Ecology of abundant versus RARE marine bacterial phylotypes (HERA, EU Marie Curie).
A. Calvo Diaz, K. Timmermans.

Netherlands-USA joint effort on trace metals in Atlantic Ocean (GEOTRACES, NWO-ALW).
R. Middag, H. de Baar.

North Sea Ballast Water Opportunity project (NSWBO, Interreg IVb-EU).
L. Peperzak, J.P. Boon, in cooperation with 40 partners in the North Sea region.

Novel technologies to resolve the role of organic matter on iron chemistry and bioavailability in the South Pacific Ocean (Australian Research Council).
V. Schoemann, K. Timmermans.

Maritime Transport Cluster (MTC, Interreg IVb-EU).
J.P. Boon.

Multi-scale modelling of calcification in scleractinian corals (MULTICALC, NWO-ALW).
C. Silva, J. van Bleijswijk Tierens Verhagen.

Praktijk netwerk zilte aardappel (Ministerie Economische zaken).
A. de Vos, K. Timmermans.

Primary Production in the North Sea: CHANGES in Resource Limitation and Energy Transfer (CHARLET, ZKO-North Sea).
P. O'Connor, C.P.D. Brussaard.

Relationships between viruses and the toxic cyanobacteria (blue-green algae) *Cylindrospermopsis raciborskii* in South East Queensland drinking supplies (Australian funding).
L. Galbraith, C.P.D. Brussaard, in cooperation with Griffith University.

The nitrogen cycle and changes in the carrying capacity of coastal waters (NICYCLE, ZKO).
I. Taha, K.R. Timmermans.

The origin and fate of Fe binding organic ligands (OFFBOL, NWO-ALW).
L. Gerringa.

Viral impact on microbes in coastal waters of the Antarctic Peninsula and its ecological implications (VIRANT, NWO ALW NAAP).
C. Evans, A. Hoogstraten, L. Peperzak, C.P.D. Brussaard.

Virus Impact on Bacteria and Microalgae in Intertidal Sediments (Portuguese funding).
C. Carreira, C.P.D. Brussaard in cooperation with University of Copenhagen.

Wadden Sea ecosystem data assimilation and integrated modelling (ZKO).
P. Ruardy, J. Nauw (FYS), in cooperation with Imares.

Zeewier Hatchery (ELI: Innovatie in de visketen).
J. van Bleijswijk, P. Luttkhuizen, K. Timmermans, in cooperation with Hortimare, WUR-PRI, RUG, Stichting Noordzeeboerderij.

FYS

A modeling intercomparison for the North Sea with a view to methane dispersion (fate methane), Bubbleology Research International.
J.J. Nauw (PI), H. de Haas (PI) (GEO) in collaboration with T. Gerkema (FYS) and J. Greinert (GEO).

Astronomy with a Neutrino Telescope and Abyss environmental REsearch (ANTARES; Nikhef).
H. van Haren, in cooperation with Nikhef and ANTARES-collaboration.

North atlantic climate. Predictability of the climate in the north atlantic/european sector related to north atlantic/arctic ocean sea surface temperature and sea ice variability and change (naclim; financed by the european commission through the 7th framework programme for research, theme 6 environment).
L. de Steur, a collaboration between 18 EU research institutes.

Citizens' observatory for coast and ocean optical monitoring, Citclops. SME-targeted Collaborative EU Project, ENV.2012.6.5-1: Developing community-based environmental monitoring and information systems using innovative and novel earth observation applications.
M.R. Wernand, in collaboration with BDIGITAL, CSIC, UNIOL, VU-Vumc, Kinetical, TriOS, MARIS, NOVELTIS, TCD-Coastwatch and Deltares.

Contemporary off shelf sediment transport on the Ebro Margin (COSTEM).
H. van Haren, NIOZ participant in CSIC – CIM project, Barcelona, Spain.

Cubic kilometre neutrino telescope (KM3NeT, NWO-Esfri).
H. van Haren, in cooperation with NIKHEF, Amsterdam.

The future of the Wadden Sea sediment fluxes: still keeping pace with sea level rise? (PACE, NWO-ALW).
M. Duran Matute, T. Gerkema (PI), in collaboration with Deltares, IOW Warnemünde and HZG Geesthacht.

Budget modeling of fines in the Dutch coastal zone (NTW3.1, Building With Nature/Ecoshape).
C.M. van der Hout, T. Gerkema, J. Nauw (FYS), H. Ridderinkhof (DIR), in collaboration with Deltares.

Particle transport, deposition and resuspension in the Southern North Sea and biogeochemical consequences (FOKUZ).

M. Tiessen, T. Gerkema (PI).

GEO

AVAATECH support (AVAATECH).

G.-J. Brummer

Atlantic Deepwater Canyons (Mineral Management Service, USA).

F. Mienis, G. Duineveld (MEE), in collaboration with University of North Carolina – Wilmington (USA), Marine Conservation Institute (USA).

Double trouble, consequences of ocean acidification - past, present and future (Darwin).

G.J. Reichart

Transatlantic fluxes of Saharan dust: changing climate through fertilising the ocean? (DustTraffic, ERC).

J.-B. Stuut, G.-J. Brummer, in collaboration with University of Bremen (Germany) and University of Miami (Florida, USA).

Climatic and anthropogenic shifts in seasonal river runoff into the Indian Ocean over the past Millennium resolved by coral geochemistry and photoluminescence (CLIMATCH, NWO-ALW).

C. Grove, J. Zinke, G.J.A. Brummer, in collaboration with VU University Amsterdam.

Coral Reefs and Global Change – a historical perspective spanning the western Indian Ocean. (Western Indian Ocean Marine Science Association-Marine Science for Management; WIOMSA-MASMA).

J. Zinke, G.J.A. Brummer, C. Grove, in collaboration with University of Cape Town (South Africa).

Cold-water coral reefs and mounds: unknown carbon sinks in the deep-sea? (NWO-VENI).

F. Mienis

Natural monitors benchmark environmental change: valorization of the NIOZ-Core Scanner (NWO-Valorization).

G.J.A. Brummer, R. Tjallingii, B. Koster.

Planktonic foraminiferal shell thinning due to anthropogenic CO₂ emissions? (NWO-ALW).

G.J.A. Brummer, in collaboration with VU University Amsterdam.

Ocean variability and impact of water column properties on proxy formation (GATEWAYS, EU-FP7 Marie Curie International Training Network).

C. Cleroux, J. Steinhardt, S. Kasper (BGC), G.J.A. Brummer, S. Schouten (BGC), H. van Aken (FYS), in collaboration with University of Barcelona (Spain) and University of Cape Town (South Africa).

Natural, climatic and anthropogenic change of the Berau Delta/Barrier reef system: High-resolution coral proxy analysis of the modern environment and reconstruction on a seasonal to centennial timescale (WOTRO-KNAW-ICOMAR).

R. Nagtegaal, G.J.A. Brummer, R. Bak (MEE), in collaboration with Utrecht University and KNMI.

Relationships between primary productivity and the benthic environment in upwelling regions during the last deglaciation (Vetenskaps Radet Sweden).

Lund University (Sweden) in collaboration with J.B.W. Stuut.

A high-precision stable isotope mass spectrometer for marine tracer analysis (NWO-Middelgroot).

S. Schouten (BGC), G.J.A. Brummer, et al. (MEE, BIO).

European Multidisciplinary Seafloor Observatory - Preparatory Phase (EMSO-PP, EU-FP6).

J. Greinert, H.C. de Stigter, T.C.E. van Weering.

Hydroacoustic seafloor and water column mapping: New tools for multibeam backscatter analyses and 3D/4D visualization (NWO Valorization).

J. Greinert, H. de Haas., L. Maas (FYS), K. Philippart (MEE), G. Duineveld (MEE).

Spatial methane and CO₂ flux quantification from a pockmark area in the Black Sea: SPUX. (ESF Eurofleets).

J. Greinert, in collaboration with IFM-GEOMAR, Kiel (Germany), Ghent University, Ghent (Belgium), IOBAS, Varna (Bulgaria).

Hotspot Ecosystem Research and Man's Impact on European Seas (HERMIONE, EU- FP7).

H.C. de Stigter, T.C.E. van Weering, M.S.S. Lavaleye (MEE), G.C.A. Duineveld (MEE).

Tracing past to modern Indo-Atlantic exchange in sedimentary records (INATEX-B, NWO/ZKO-Oceans).

G.J.A. Brummer, R. Tjallingii, H. Ridderinkhof (FYS), T.C.E. van Weering, in collaboration with VU University Amsterdam, Utrecht University, KNMI, University Kiel (Germany).

A process study on the impact of the Arabian Sea oxygen minimum zone on organic matter degradation, nutrient regeneration, trace metal cycling and foraminiferal proxies (PASOM, NWO-ALW).
Utrecht University, J.S. Sinninghe Damsté (BGC) et al., G.J.A. Brummer (co-applicant).

Permafrost and gas hydrate related methane release in the Arctic and impact on climate change: European cooperation for long-term monitoring (PERGAMON, ESF/COST).

J. Greinert, A. Stadnitskaia (BGC).

Scanning Sediment and Coral Climate Archives Applications of Non-destructive Nature. (NWO-Middelgroot)

G.J.A. Brummer, R. Tjallingii, J.-B.W. Stuut, W. Boer, R. Gieles.

Southern Indian Ocean/Tropical Pacific teleconnections assessed by a joint coral-in situ ocean monitoring database (SINDOCOM, NWO-ALW/Climate Change).

C. Grove, J. Zinke, G.J.A. Brummer, in collaboration with VU University Amsterdam and KNMI.

Controls on sediment phosphorus release from temperate intertidal sediments (FCT, Portugal).

C. Leote, H.G. Epping, in collaboration with Trinity College Dublin (Ireland).

Construction of a remotely controlled vehicle for benthic research (MOVE!-I&II, NWO-Middelgroot/BMBF).

J. Greinert, G.C.A. Duineveld (MEE), in collaboration with MARUM Bremen (Germany).

Deep Corr, Corrosion risks in deep sea operations.

M. Smit, A. Stadnitskaia

MEE

Effects of invasive species on native predator-prey and pathogen-host webs, (NWO, BmBF).

D.W. Thielges, P.C. Luttikhuisen C.J. Camphuysen, in cooperation with AWI Sylt Germany

Data analysis PRODUS (Ministry I and M, shellfish sector).

J. Drent, R. Dekker, in cooperation with IMARES.

Biodiversity in the Netherlands: NIOZ fyke data (Netherlands Biodiversity Information Facility NL-BIF).

H.W. van der Veer.

Towards Zero Impact: modeling impacts of deep-sea mining (Maritiem Innovatie Programma)

M. Lavaleye, G. Duineveld.

Kader Richtlijn Marien: ontwikkeling van indicatoren en een monitoringsprogramma Noordzee (Ministerie van Economische Zaken)
G. Duineveld, M. Lavaleye.

Beschrijving benthische fauna Doggerbank, Klaverbank en Gasfonteinen (Ministerie van Economische Zaken)
G. Duineveld, M. Lavaleye.

Monitoring van het Friese Front: megafauna TO-survey. (Ministerie van Economische Zaken)
G. Duineveld, M. Lavaleye, M. Bergman, R. Witbaard.

OCTA: drafting sustainable operation guidelines for deep-sea mining (IHC)
M. Lavaleye, G. Duineveld.

Impact of OWEZ wind farm on the local macrobenthos community (Shell/NUON).
M.J.N. Bergman, G.C.A. Duineveld, S. Ubels, M. Mulder, R. Daan.

Beached bird surveys 2012/13 (contract Rijkswaterstaat).
C.J. Camphuysen.

Lesser Black-backed Gull studies (contracts Rijkswaterstaat).
C.J. Camphuysen.

Age determination in bivalves: validation of the seasonality of shell growth bands along the European coast.
J.F.M.F. Cardoso, H.W. van der Veer, in cooperation with CIIMAR/CIMAR (Porto, Portugal).

Project sustainable shellfish culture (PRODUS) (Ministry I and M, shellfish sector).
R. Dekker.

Development of sensor algorithms for estimating primary production (IN PLACE; NWO-ZKO).
M. van Dijk, C.J.M. Philippart, J.C. Kromkamp, in cooperation with IVM-VU, RWS and ITC.

Assessment of the interaction between corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond (CoralFISH, EU).
G.C.A. Duineveld, M.S.S. Lavaleye.

Physical and biological characteristics of Atlantic Canyons (Bureau of Ocean Energy Management-BOEM, USA).
G.C.A. Duineveld.

Defining conceptual models on ecological functioning of the Wadden Sea system (WaLTER, Waddenfonds).
E.O. Folmer, C.J.M. Philippart, in cooperation with CWSS, IMARES, RUG, RUN, SOVON, Ministry EL&I, NAM, SBB, NM, Province Fryslan, RWS, Ministry I and M.

Pervasive impact of avian migrant predators on intertidal communities may connect ecosystems on a global scale (VIDI-NWO).
J.A. van Gils.

Cascading predator-prey effects in a pristine seagrass-based food web (NWO-ALW Open Programme).
J.A. van Gils, C.H.R. Heip.

Analyses of factors explaining success and failure in bridging the gap between scientists and policy makers (SPIRAL, EU FP7).
E. van Haastrecht, A. Krieg, C.J.M. Philippart, C.H.R. Heip.

Hotspots of Biodiversity in the North Sea (IMARES & Directie Kennis en Innovatie of Ministry of Economy, Agriculture and Innovation).

M.S.S. Lavaleye, M.J.N. Bergman.

Hotspot Ecosystem Research and Man's Impact On European Seas (HERMIONE, EU).

M.S.S. Lavaleye, G.C.A. Duineveld.

Causes and consequences of selective feeding by juvenile bivalves, subproject of part of consequences of phosphorus reduction for the dynamic transfer of organic matter (P-REDUCE; NWO-ZKO).

V.V. Lehmpfuhl, C.J.M. Philippart, J.C. Kromkamp (YMM) and P.M.J. Herman (YRE).

Development of a dynamic biogeochemical sediment nutrient water exchange model (P-REDUCE, NWO/ZKO).

L. Mulder, C.J.M. Philippart, J.C. Kromkamp (YMM), K. Soetaert (Yes), P.M.J. Herman (YRE).

Integrated Network for Production and Loss Assessment in the Coastal Environment (IN PLACE; NWO-ZKO).

C.J.M. Philippart (general project-leader), in cooperation with IVM-VU, RWS and ITC.

Wadden Sea Long-Term Ecosystem Research (WaLTER, Waddenfonds).

C.J.M. Philippart (general project-leader), in cooperation with CWSS, IMARES, RUG, RUN, SOVON, Ministry EL&I, NAM, SBB, NM, Province Fryslan, RWS, Ministry I and M.

MON

Pilot verwijdering Japanse oesters Veerse meer (RWS-DZL)

P. van Avesaath, H. Hummel, A. Engelberts.

Monitoring Benthos in Delta wateren (RWS-WD, MWTL).

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, T. Scott, W. van Houten.

T2009 Rapportage Schelde-estuarium, Invulling *Ecologisch functioneren*, onderdelen van *Flora & fauna* en bijdragen aan *Waterkwaliteit*. (RWS-DZL & VNSC, onderaannemer van ARCADIS).

S. Wijnhoven, H. Hummel, J. Kromkamp (MM).

T2009 Aanvullende opdracht 'Habitat oppervlaktes Westerschelde' (RWS-DZL & VNSC, onderaannemer van Universiteit van Antwerpen).

S. Wijnhoven, H. Hummel.

KRM Indicatoren ontwikkeling, Analyse en selectie geschikte indicator soorten voor habitats en gebieden van de Noordzee (Ministerie van EZ).

M. Lavaleye (MEE), G. Duineveld (MEE), S. Wijnhoven.

Towards an Integrated Marine and Maritime Science Community (EU, MarCom).

H. Hummel.

Vectors of Change in Oceans and Seas Marine Life, Impact on Economic Sectors (EU, VECTORS).

P. van Avesaath, H. Hummel, S. Wijnhoven, A. Engelberts

Monitoring Benthos in Delta wateren (RWS-WD, MWTL).

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, T. Scott, W. van Houten.

Compensatie Monitoring MV2 (IMARES)

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, T. Scott, W. van Houten.

Garnaalexperiment Voordelta (IMARES).

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, T. Scott, W. van Houten.

Measuring the biotic response on seabed landscaping (IMARES, AMS3).

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, T. Scott, W. van Houten.

Bemonstering van de Zeeuwse Banken in 2011 en 2012 (IMARES, LM-008774).

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, S. Wijnhoven, T. Scott, W. van Houten.

3de verruiming WS Benthos Onderzoek (RWS-DZL).

V. Escaravage, H. Hummel, A. Verburg, A. Dekker, A. Engelberts, D. Blok, L. Kleine Schaars, O. van Hoesel, R. van Vooren, S. van Leiden, T. Scott, S. Wijnhoven, W. van Houten.

YES

Fundamenteel onderzoek kust en zee (FOKUZ, NWO).

M. Le Guitton, K. Soetaert.

Assessment of the interaction between corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond (CORALFISH, FP7 - EU).

C. Cathalot, D. van Oevelen, K. Soetaert.

Microbial carbon fixation in past and future high CO₂ oceans (Darwin Center).

A. de Kluijver, K. Soetaert.

Impact of benthic processes on biogeochemical organic carbon cycling and organic proxy records in marine sediments (Darwin Center).

L. Pozzato, K. Soetaert.

Quantifying Darwin's last idea: The influence of bioturbation on the biogeochemistry of marine sediments, and its impact on the global carbon cycle. (NWO-ALW).

C. Cathalot, T. Cox, B. Veuger, S. Hildago Martinez, F. Meysman.

Insights into the sensitivity of cold-water communities to drilling mud: enhancing diagnosis and decision-making with emphasis on *Lophelia* (DIACORA, Norwegian Research Council).

D. van Oevelen. In cooperation with International Research Institute of Stavanger (IRIS).

European project on ocean acidification (EPOCA, EU).

T. van Engeland, B. Veuger, K. Soetaert.

Hotspot Ecosystem Research and Man's Impact on European Seas (HERMIONE, FP7 - EU).

D. van Oevelen, K. Soetaert.

In situ monitoring of oxygen depletion in hypoxic ecosystems of coastal and open seas, and land-locked water bodies (HYPOX, EU).

T. Cox, K. Soetaert.

Recovery of faunal-mediated ecosystem functions from hypoxia (HYPOXIA, Darwin Center).

D. Seitaj, F. Meysman.

The nitrogen cycle and changes in the carrying capacity of coastal waters (NICYCLE, NWO-ALW).

A. Moneta, K. Soetaert.

Dynamics of acidification in the North Sea: documentation and attribution (NWO-ALW).

H. Brenner, F. Meysman.

Always look on the brown side of life: stable isotope tracing of sponge detritus through the food web of coral reef cavities, Schure-Beijerinck-Popping Fonds.

D. van Oevelen.

Vulnerable habitats and species in petroleum resource management: impact of sediment exposure on sponge grounds (SedExSponge, Norwegian Research Council).

D. van Oevelen. In cooperation with Institute of Marine Research (Norway)

Hardwiring the ocean floor: the impact of microbial electrical circuitry on biogeochemical cycling in marine sediments (SedBiogeochem2.0, EU-ERC).

L. Burdorf, S. Engelhard, A. Tramper, J. Brassler, F. Meysman.

YMM

Present and past role of chemoautotrophy in marine sediments (Darwin).

D. Vasquez Cardenas , H.T.S. Boschker (PI).

Integrated Network for Production and Loss Assessment in the Coastal Environment (IN PLACE, NWO ALW).

J.C. Kromkamp.

Demonstration of integrated and sustainable enclosed raceway and photobioreactor microalgae cultivation with biodiesel production and validation (EU, INTESUSAL).

V. Confurius - Guns, M. Grego, J. Peene (YLA), L.J. Stal (PI).

Marine Microorganisms: Cultivation Methods for Improving their Biotechnological Applications (EU, MaCuMBA).

L.J. Stal.

The nitrogen cycle and changes in the carrying capacity of coastal waters (NICYCLE, NWO ALW).

H. Fan, L.J. Stal.

Productivity tools: Automated tools to measure primary productivity in european seas. A new Autonomous Monitoring Tool to Measure the Primary Production of Major European Seas (EU, PROTOOL).

G. Silsbe, J. Waanders, J.C. Kromkamp (PI).

Mussel seed collector (MZI) project.

S. Ihnken, J.C. Kromkamp (PI).

Consequences of phosphorus reduction for the dynamic transfer of organic matter between primary producers and primary consumers (NWO ALW).

J. Ly, J.C. Kromkamp (PI).

New external projects

BGC

A novel tool for continental climate reconstruction: long-chain diols in lake sediments (NWO INNOVATIONAL RESEARCH INCENTIVES SCHEME VENI). PI: *S.W. Rampen*.

Assessing Amazon paleohydrological and paleotemperature changes using lipid biomarkers (Amazon-HYDRAULIK, University Brazil). PI: *J.-H. Kim (PI)*. In cooperation with *University Brasilia*.

BIO

Anti-fouling experiment (Car Creation, Sintens-Kansenkanon). PI's: *L. Peperzak and J.P. Boon*.

Ballastwater treatment filtertest (PecoFacet). PI's: *L. Peperzak and J.P. Boon*.

Importance of microbial viral lysis over grazing in a changing Arctic Ocean (VIRARCT, NWO/ALW NPP programme). PI: *C.P.D. Brussaard*.

Marine Microorganisms: Cultivation Methods for Improving their Biotechnological Applications (MaCumBA, EU FP 7). PI's: *K.R. Timmermans, C.P.D. Brussaard and L. Stal (YMM)*.

The origin and fate of Fe binding organic ligands (OFFBOL, NWO-ALW). PI: *L. Gerringa*.

Zeewier Hatchery (ELI: Innovatie in de visketen). PI's: *J. van Bleijswijk, P. Luttkhuizen, K.R. Timmermans*, in cooperation with *Hortimare, WUR-PRI, RUG, Stichting Noordzeeboerderij*.

FYS

Citizens' observatory for coast and ocean optical monitoring, Citclops. SME-targeted Collaborative EU Project, ENV.2012.6.5-1: Developing community-based environmental monitoring and information systems using innovative and novel earth observation applications. PI: *M.R. Wernand (FYS)*. In Cooperation with *BDIGITAL, CSIC, UNIOL, VU-Vumc, Kinetical, TriOS, MARIS, NOVELTIS, TCD-Coastwatch and Deltares*.

NorthSeaReview, Bubbleology Research International. PI's: *J.J. Nauw (FYS) and H. de Haas (GEO)* in collaboration with *T. Gerkema (FYS) and J. Greinert (GEO)*.

North Atlantic Climate. Predictability of the climate in the North Atlantic/European sector related to North Atlantic/Arctic Ocean sea surface temperature and sea ice variability and change (NACLIM). Financed by the European Commission through the 7th Framework Programme for Research, Theme 6 Environment, Grant Agreement 308299. PI: *L. de Steur*. a cooperation between 18 EU research institutes. Programme coordinator: *D. Quadfasel (UHAM)*.

GEO

AVAATECH support (AVAATECH). PI: *G.-J. Brummer*

Atlantic Deepwater Canyons (Mineral Management Service, USA). PI's: *F. Mienis, G. Duineveld (MEE)*, in collaboration with *University of North Carolina – Wilmington (USA), Marine Conservation Institute (USA)*.

Double trouble, consequences of ocean acidification - past, present and future (Darwin). PI: *G.J. Reichert*

Transatlantic fluxes of Saharan dust: changing climate through fertilising the ocean? (DustTraffic, ERC). PI's: *J.-B. Stuut, G.-J. Brummer*, in collaboration with *University of Bremen (Germany) and University of Miami (Florida, USA)*.

Cold-water coral reefs and mounds: unknown carbon sinks in the deep-sea? (NWO-VENI). PI: *F. Mienis*.

Deep Corr, Corrosion risks in deep sea operations. PI's: *M. Smit and A. Stadnitskaia*.

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Effects of invasive species on native predator-prey and pathogen-host webs, (NWO, BmBF). PI's: *D.W. Thieltges, P.C. Luttikhuisen C.J. Camphuysen, in cooperation with AWI Sylt Germany*.

Data analysis PRODUS (Ministry I and M, shellfish sector). PI's: *J. Drent, R. Dekker, in cooperation with IMARES*.

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Beschrijving benthische fauna Doggerbank, Klaverbank en Gasfonteinen (Ministerie van Economische Zaken). PI's: *G. Duineveld and M. Lavaleye*.

Monitoring van het Friese Front: megafauna TO-survey. (Ministerie van Economische Zaken). PI's: *G. Duineveld, M. Lavaleye, M. Bergman and R. Witbaard*.

OCTA: drafting sustainable operation guidelines for deep-sea mining (IHC). PI's: *M. Lavaleye and G. Duineveld*.

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T2009 Rapportage Schelde-estuarium, Invulling *Ecologisch functioneren*, onderdelen van *Flora & fauna* en bijdragen aan *Waterkwaliteit*. (RWS-DZL & VNSC, onderaannemer van ARCADIS). *S. Wijnhoven, H. Hummel, J. Kromkamp (MM)*.

T2009 Aanvullende opdracht 'Habitat oppervlaktes Westerschelde' (RWS-DZL & VNSC, onderaannemer van Universiteit van Antwerpen). *S. Wijnhoven, H. Hummel*.

KRM Indicatoren ontwikkeling, Analyse en selectie geschikte indicator soorten voor habitats en gebieden van de Noordzee (Ministerie van EZ). *M. Lavaleye (MEE), G. Duineveld (MEE), S. Wijnhoven*.

YES

Hardwiring the ocean floor: the impact of microbial electrical circuitry on biogeochemical cycling in marine sediments (SedBiogeochem2.0), EU-ERC, PI: *F. Meysman (YES)*.

Always look on the brown side of life: stable isotope tracing of sponge detritus through the food web of coral reef cavities, Schure-Beijerinck-Popping Fonds. PI: *D. van Oevelen (YES)*.

Vulnerable habitats and species in petroleum resource management: impact of sediment exposure on sponge grounds (SedExSponge), Norwegian Research Council. PI: *D. van Oevelen (YES)*. In cooperation with *Institute of Marine Research (Norway)*

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Greinert J. prof. dr.
Brummer G.-J.A. prof. dr.
Boer W.
Cléroux C.P.M. dr.
Dijk I.E.Y. van MSc
Gaever P.A.J. van
Grove C. MSc
Haas H. de dr.
Koster B.
Mienis F. dr.
Mulder L.L. MSc
Nagtegaal R. MSc
Nooijer L.J. de dr.
Richter T.O. dr.
Steinhardt J.J. MSc
Stigter H.C. de dr.
Stocchi P. dr.
Stuut J.B.W. dr.
Tjallingii R.H. dr.
Witte A.J.M.

Marine Organic Biogeochemistry

Sinninghe Damsté J.S. prof. dr.
Schouten S. prof. dr.
Baas M.
Bale N.J. dr.
Blaga C.I. dr.
Bommel R. van
Booij K. dr.
Bree L.G.J. van MSc
Chivall D.R. dr.
Donkers K.
Dorhout D.J.C.
Gibson R.A. dr.
Heinzelmann S.M. MSc
Hopmans E.C. dr.
Jonge C. de MSc
Kasper S. MSc
Kim J.H. dr.
Kool D.M. dr.
Lengger S.K. MSc
Lipsewers Y.A. MSc
Lopes dos Santos R.A.F. MSc
M'Boule-Gorr D. MSc
Meer M.T.J. van der dr.
Mets A.
Moore E.K. dr.
Ossebaar J.
Panoto F.E.
Rampen S.W. dr.
Rodrigo Gamiz M. dr.
Rush D.J. MSc
Rijpstra W.I.C.
Schoon P.L. MSc
Soelen E.E. van MSc
Sinke-Schoen D.G.W.
Sollai M. MSc
Stadnitskaia A. dr.
Svensson G.I.E. MSc
Verweij M.
Villanueva Alvarez L. dr.
Warden L.A. MSc
Zell C.I. MSc

Biological Oceanography

Timmermans K.R. dr.
Arenoe-Ghita S.F.
Baar H.J.W. de prof. dr.
Biggs T.E.G. MSc
Bleijswijk J.D.L. van dr.

Blin A.
Boon J.P. dr.
Bown J.C.A. dr.
Brussaard C.P.D. prof. dr.
Clargo N.M. MSc
Crawfurd K.J. dr.
Doggen P.R.
Duyf F.C. van dr.
Evans C. dr.
Ferreira da Silva C.I.
Garritsen-van Arnhem E.M.C.
Gerringa L.J.A. dr.
Hoogstraten A. MSc
Immler E.U.I.
Jones E.M. dr.
Jong de J.T.M.
Klimiuk A.M. MSc
Kooijman K.
Laan P.
Lamers-Rutkauskaite A.
Liebich V. MSc
Linden M.C.J. van der
Lubsch A.
Maat D.S. MSc
Middag R. MSc
Mojica K.D.A. MSc
Mosk D.A.
Müller B. MSc
Noordeloos A.A.M.
Noort G.J. van
O'Connor P.F. MSc
Oever A. van den
Ogier J.J.
Oosterhuis S.S.
Peperzak L. dr.
Poll W.H. van der dr.
Poszig D.
Ruardij P. MSc
Rijkenberg M.J.A. dr.
Salt L.A. MSc
Schoemann V.F. dr.
Slooten C. van MSc
Snoek J.
Star I.M. van der MSc
Stehouwer P.P.V. MSc
Taha I.A.O. MSc
Thuroczy C.E. dr.
Vloemans M.
Vos A.C. de dr.
Witte H.J.

Marine Ecology

Veer H.W. van der dr.
Philippart C.J.M. dr.
Bergman M.J.N. MSc
Bijleveld A.I. MSc.
Bol-den Heijer A.C.
Bom R.A. MSc
Brugge M.C.
Camphuijsen C.J.
Compton T.J. dr.
Dapper R.
DeKinga A. MSc
Dekker E.
Dekker R. MSc
Dijk M.A. van MSc
Drent J. dr.
Duineveld G.C. MSc
Duijns S. MSc
Folmer E.O. MSc
Fouw J. de MSc
Freitas V. dr.
Galama Y.K.
Geest M. van der MSc
Gils J.A. van dr.
Goedknegt M.A. MSc
Groot L.
Haastrecht E.K. van MSc
Hoek J. van der
Holthuijsen S.J.
Horn J.F.T. ten
Hout P.J. van den dr.
Jouta J. MSc
Jung A.S. MSc
Klunder L.M.
Koolhaas A. MSc
Lavaley M.S.S. MSc
Lehmpfuhr V.V. MSc
Luttikhuisen P.C. dr.
Lyashevskaya O.V.
McSweeney N. MSc
Meer J. van der prof. dr.
Miguel S.M.
Mulder M.
Nieuwland G.
Oudman T. MSc
Piersma T. prof. dr.
Raad I. de
Rakhimberdiev E. dr.
Smelter M. MSc

Smith J.W.
Spaans B. MSc
Thieltges D.W. dr.
Veenstra M.
Walraven L. van MSc
Waser A. MSc
Watmough T.
Weerlee E.M. van
Welsh J.E. MSc
Witbaard R. dr.
Witte J.I.J.
Zee E.M. van der MSc

Facility Management

Bonne E.
Daalder R.M.
Heerschap J.H.
Keizer P.
Lakeman R.
Trap B.

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Derksen J.D.J.
Malschaert H.
Manshanden G.M.
Nauw R.A.

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Weegen L.M.M. van der

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Heip C.H.R. prof. dr.
Watmough T.

Marine Technology

Smit M.G. MSc
Porto H.H. de

Marine Technology

Instrumentation

Heerwaarden J. van
Bakker R.
Boekel H.J.

Keijzer E.J.H.

*Marine Technology
Electronics*

Lenting W.A.
Groenewegen R.L.
Asjes A.J.
Cluderay J.M.N.
Eveleens M.
Franken H.
Koster B.
Laan M.
Maarseveen F. van

*Marine Technology
Mechanical*

Schilling J.
Bakker M.C.
Blom J.J.
Boersen B.
Boom L.
Gieles S.J.M.
Grisnich P.W.
Visser J.D. de
Witte Y.
Wuis L.M.

**Ship Management and
Logistics**

Greef Th. de
Buisman T.C.J.
Adriaans E.J.
Alkema P.R.
Boon W.J.
Breejen den I.
Daalder K.J.
Ellen J.C.
Feij B.
Fockema Andreae A.D.H.
Frankfort M.
Haaren J. van
Heide R. van der
Hiemstra F.
Jourdan M.T.
Katwijk H.J. van
Kikkert K.C.
Kleine M.D.M. de
Kuijt P.
Maas J.J.M.
Puijman E.A.

Seepma J.
Stevens C.T.
Vermeulen G.P.
Vries H. de
Vries M.J. de

Emeritus Scientists

Baars M.A. dr.
Bak R.P.M. prof. dr.
Beukema J.J. dr.
Cadée G.C. dr.
Leeuw J.W. de prof. dr.
Vooyes C.G.N. de dr.
Weering, T.C.E. van prof. dr.
Wolf P. de dr.

Guest scientists

Carreira C. MSc.
Goeij P.J. de dr.
Lok T. MSc
Santos S. dr.
Saraiva S.A. MSc
Sliwinska K.K. dr.

YERSEKE

Ecosystem Studies

Soetaert K.E.R. prof. dr.
Brasser J. A.
Brenner H.
Burdorf L.D.W.
Cathalot C.M.J. dr.
Cox T.J.S.
Engelhard S.L.
Guitton M. le
Hidalgo Martinez S.
Kluijver A. de
Knuijt J.A.
Meysman F.J.R. dr.
Moneta A.
Müller C.E.
Nafie Y.A. la
Oevelen J.D. van dr.
Pozzato L.

Rijswijk van P.
Seitaj D.
Tramper A.
Veuger B. dr.
Ysebaert T.J.W. dr.

Analytical Laboratory

Houtekamer M.J.
Böhm P.
Breugel P.A. van
Maas-Maas Y.E.M. van der
Peene J.
Sinke J.J.
Zetten J.A. van

Marine Microbiology

Stal L.J. prof. dr.
Atli N.
Bolhuis H.
Boschker H.T.S. dr.
Confurius-Guns V.
Fan H.
Grego M.
Grosse J.
Hörnlein C.
Ihnken S.S. dr.
Kromkamp J.C. dr.
Ly J.
Moerdijk-Poortvliet T.C.W.
Silsbe G.M. dr.
Vasquez Cardenas D.
Vlaming J.D.
Waanders J.
Wijnholds-Vreman J.A.

Monitor Taskforce

Hummel H. prof. dr.
Avesaath P.H. van dr.
Blok D.B.
Dekker A.
Engelberts A.G.M.
Engelhard S.L.
Escaravage V.L. dr.
Garcia Ruiz C.

Hoesel O.J.A. van
Houten W.J. van
Hummel C.A.
Kleine Schaars LB.J.
Leiden S. van
Rijcke S.A.R. de
Scott T.
Sistermans W.C.H.
Verburg A.M.
Vooren R. van
Waanders J.
Wijnhoven S.

Jagt-de Zeeuw C.J. van der
Jonkman J.T.
Kristalijn M.L.
Megens J.C.M.
Poley-Vos C.H.
Ruissen J.C.
Sinke H.E.
Wisse L.L.B.

Spatial Ecology

Herman P.M.J. prof. dr.
Beauchard O. dr.
Belzen J. van
Berg A.C.Y. van den
Bouma T.J. dr.
Cathalot C.M.J.
Cozzoli F.
Dalen J. van
Gillis L.G.
IJzerloo L.P. van
Jager M. de
Koppel J. van de prof. dr.
Liu Q.
Nieuwhof S.
Paoli H.C. de
Qi H.
Schwarz C.
Soelen J. van
Soissons L.
Wal D. van der dr.
Wielemaker-van den Dool A.
Ysebaert T.J.W. dr.

Staff & Facility Management

Herman P.M.J. prof. dr.
Coomans P.J.
Davidse T.
Endt A. van der
Haazen L.A.M.
Houte-van den Berge J. van
Hulsteijn-Laven N. van

Visitors (< 2 weeks at NIOZ)

Aalharbi, dr. N., King Saud University, Saudi Arabia, 2-4 July.
Al-Harbi, dr. N.A., King Saud University, 25 June-6 July.
Becking, dr. L.E., IMARES, Den Helder, 10 December.
Bloemsma, M., Delft University of Technology, 1-5 October.
Braeckman, U., University Ghent, Belgium, 2-6 July.
Brooks, G., Eckerd College, St. Petersburg, Florida, USA, 15-17 October.
Burmeister, K., Helmholtz Zentrum Geesthacht, Germany, 19-23 March.
Capece, prof. dr. B., Universidade Eduardo Mondlane UEM, Maputo Mozambique, 5 July.
Dedeckker, P., Australian National University (ANU), Canberra, Australia, 13-16 June.
Feldmeijer, W., VU University, Amsterdam, 27 February.
Forster, dr. R., CEFAS, UK, 11-15 June.
Frøhlke, T., Geological Survey of Denmark and Greenland (GEUS), Copenhagen, Denmark, 6-9 May.
Gostiaux, L., LEGI, Grenoble, France, 1-6 April.
Hensen, drs. R., LVV, St Eustatius, 3 October.
Hunter, W., Oceanlab, University of Aberdeen, UK, 9-13 January.
Jung, S., University of Edinburgh, UK, 7-10 August.
Klar, S., MARUM - Center for Marine Environmental Sciences, Bremen, Germany, 26-30 November.
Kloosterziel, R.C., University of Hawaii, 18-19 January, 4-5 December.
Komarek, dr. O., Institute of Microbiology, Trebon, Czech Republic, 12-14 June.
Kopiske, E., MARUM - Center for Marine Environmental Sciences, Bremen, Germany, 26-30 November, 10-14 December.
Kroon, D., University of Edinburgh, UK, 7-10 August.
Larson, R., Eckerd College, St. Petersburg, Florida, USA, 15-17 October.
Lucas, prof. dr. C., Universidade Eduardo Mondlane UEM, Maputo, Mozambique, 5 July.
Martin, G., The James Hutton Institute, Aberdeen, Scotland UK, 5-9 March.
Martin, R., University of Washington, Seattle, Washington, USA, 8-16 November.
Mathur, M., LEGI, Grenoble, France, 4-6 April.
Metcalf, B., Free University, Amsterdam, 27 February.
Morana, C. MSc, Katholieke Universiteit Leuven, Belgium, 25 June, 11-14 December.
Moros, M., Leibniz Institute for Baltic Sea Research (IOW), Warnemünde, Germany, 15 February.
Morozov, E., Shirshov Institute, Moscow, Russia, 16-20 April.
Munday, C. Australian National University (ANU), Canberra, Australia, 28-29 August.
Nooren, K., Utrecht University, 4-5 September.
Olbers, D. AWI Bremerhaven, 17-29 August.
Osborn, A., GEOMAR, Kiel, Germany, 22-31 January.
Oxborough, dr. K, Chelsea Technologies Group LTD, Surrey England, 12-14 June, 14-16 August.
Panieri, G., CNR-ISMAR, Bologna, Italy, 8-10 November.
Pieke, L., Curaçao Sea aquarium, Dutch Caribbean, 14 February.
Pomponi, prof. dr. S., Florida Atlantic University, Harbor Branch and Wageningen University, 10 December.
Prasil, dr. O., Institute of Microbiology, Trebon, Czech Republic, 12-14 June.
Prins, M., VU University Amsterdam, 4 September.
Quilambo, prof. dr. O., University Eduardo Mondlane (UEM), Maputo, Mozambique, 5 July.
Rachel Jeffreys, School of Environmental Sciences, University of Liverpool, 18-30 June .
Randlett, M-E., EAWAG, 5-8 November.
Rottgers, dr. R., Institute of Coastal Research, Hamburg, Germany, 12-14 June.
Schenk, Mr. L.L.M., Public & Media Relations/Marketing Manager Substation, Curaçao, 27 July.
Schluepmann, dr. H., University of Utrecht, 18-19 October.
Sicner, M., Photon System Instruments, Czech Republic.
Simis, dr. S., Finnish Environment Institute SYKE, Finland, 11-15 June.
Sipkema, dr. D., Wageningen University, 10 December.
Starrlight, A., Aix-Marseille University, France, 8-12 October.
Suggett, dr. D., Essex University, UK, 11-15 June.
Tarakanov, R., Shirshov Institute, Moscow, Russia, 16-20 April.
Vandenbergen, J., Ghent University, Belgium, 30 March-1 April.
Vandoorne, W., Ghent University, Belgium, 1-4 May.
Viel, M., Ghent University, Belgium, 15-19 April.
Wieling, I., Delft University of Technology, 4-22 June.

Wijffels, prof dr. R., Wageningen University, 10 December.
Yevenes, M., Water Resources Department, University of Twente, 6, 14-15 June.

Visiting scientists

Alexandra, dr. R., Vrije Universiteit Brussel, Belgium, 1 January-30 September.
Aracri, S., University Trieste, Italy, 9 January-8 July.
de Goeij, dr. J., University of Amsterdam, various visits during the year.
De Ryck, Drs. D., Vrije Universiteit Brussel, Belgium, 12-27 April
Gommeaux, dr. M., Université de Reims Champagne-Ardenne, 5 May-31 July.
Gonzalez, Drs. V., Universidad de Cadiz, Spain, 6 August-6 September.
Guenther, F., Max Planck Institute for Biogeochemistry, Jena, Germany, 27 August-23 November.
Kunihiro, dr. T., Center for Marine Environmental Studies (CMES), Ehime University, Japan, 27 February-17 March and 27 September-31 December.
Lambert, dr. G., School of Ocean Sciences, University of Wales, Bangor, UK, 1-30 November (Euromarine fellowship)
Lima Sobrinho, R., Department of Geochemistry, Niteroi, Rio de Janeiro, Brazil, 18 October-20 December.
Mamouridis, V., Institut de Ciències del Mar, Spain, 02 February-27 April.
Montserrat, dr. F., Vrije Universiteit Brussel, Belgium, 1 January-31 December.
Polsenaere, dr. P., Vrije Universiteit Brussel, Belgium, 1 January-30 June.
Quaijtaal, W., Ghent University, Belgium, 5 - 30 Maart, 5 Oktober-2 November.
Sairah, dr. M., Vrije Universiteit Brussel, Belgium, 1 January-31 December.
Schmitt, E., München University, Germany, 11 June-31 December
Schneider, dr. R.R., Fachbereich Geowissenschaften, Bremen University, Germany, 5 April-30 September.
Sliwiska, K., Aarhus University, Denmark, 1 January-31 Augustus.
Tecchio, S., Institut de Ciències del Mar, Spain, 26 March-2 June.
van der Stocken, Drs. T., Vrije Universiteit Brussel, Belgium, 12-27 April.
van Engeland, dr. T., Vrije Universiteit Brussel, Belgium, 1 January-31 December.
Zetsche, dr. E.M., Vrije Universiteit Brussel, Belgium, 1 January-31 December.

Students

Ahrens, J., Bremen University, Germany, 1 March-7 April.
Bakker, M., Delft University of Technology, 1 January-April.
Bakker, S., VU University, Amsterdam, 5 March-4 August.
Bakker, V., Utrecht University, October.
Besseling, M., Utrecht University, 1 January-6 July.
Biber, M., University of Bangor, Wales, UK, 1 January-30 May.
Biller, T., University of Bologna, Italy, 1 August-31 December.
Bista, D., Jacobs University, Bremen, Germany, 3-28 January.
Boender, A., VU University, Amsterdam, 8 January-15 August.
Brandenburg, K., Utrecht University, 12 September-14 October.
Burdorf, L., Université Pierre et Marie Curie-Paris, 1 January-30 June.
Chan, G. University of Groningen, 1 January-1 September.
Chu, N.Y., Radboud University Nijmegen, Nijmegen, 17 September-31 December.
Çilingir, E., University of Groningen, 25 April-8 June.
Dairain, A., École normale supérieure, Paris, France, 9 February-29 July.
Dammers, M., Van Hall Larenstein, 20 August-31 December.
de Blok, R., University of Amsterdam, January-July
de Pree, A., Hogeschool Zeeland, Vlissingen, 1 January-31 May.
den Otter, T., Hogeschool HAS Den Bosch, 20 August-16 November.
den Toorn, A., Hogeschool INHolland, 6 August-31 December.
Denis, M., Wageningen University, Wageningen, 1 January-15 June.
Dessandier, P.A., University of Bordeaux, France, 1-29 February.
Dias, C., Porto University, Portugal, 1 January-28 February.
Drennan, L., University of Amsterdam, 1 April-30 June and 12-23 November.

Dyupina, E., Wageningen University, 1 April-31 July.
Ebbing, A., Utrecht University, 1 March-1 August.
Eising, K., University of Groningen, 25 April-8 June.
Farenzena, Z., University of Amsterdam, 1 October-31 December.
Ferreira, L., Porto University, Portugal, 1 January-28 February.
Fokkes, S., Stenden Hogeschool Emmen, 1 September-31 December.
Germain, M., Agrocampus Ouest, France, 5 September-31 December.
Guenther F., MPI, Bremen, Germany, 27 August-31 December.
Gutleben, J., Wageningen University, Wageningen, March-July.
Hardison, A., University of Minnesota Duluth, USA, 2-25 May.
Havermans, J., University of Groningen, 2 May-31 December.
Hong, T., Hogeschool Zeeland, Vlissingen, 17 September-31 December.
Kaskes, P., VU University, Amsterdam, April-July.
Knot, I., University of Groningen, 1 May-1 December.
Konijnendijk, T.Y.M., Utrecht University, 23 February-20 May.
Kristalijn, J., Avans Hogeschool, Breda, 9 September-31 December.
Leerink, T., University of Groningen, 1 August-1 November.
Lipsewers, T., Trainee, 1 April-1 September.
Maarsen, N., Hogeschool InHolland, 1 October-31 December.
Maierhofer, T., University of Vienna, Austria, 1 July-27 September.
McGovern, C., Bremen University, Germany, 16 April-6 August.
Meeuwissen, L., VU University Amsterdam, 7 February-29 June.
Mermans, D., Utrecht University, 19 November-31 December.
Merschel, G., Utrecht University, January-June.
Moons, S. Leiden University, Leiden, 1 March-31 August.
Mulders Y., Utrecht University, 15 January-15 October.
Nauta, R., University of Groningen, 3 September-31 December.
Nilmawati, Wageningen UR, April-August.
Nogueira, A.F., Porto University, Portugal, 1 January-28 February.
Ottolander P., Utrecht University, 1 January-June.
Pander, J., University of Amsterdam, Amsterdam 12-23 November.
Penning, E., University of Groningen, 1 January-1 July.
Piel, T., Utrecht University, 1 October-31 December.
Poorta, D., Trainee, 13 February-11 May.
Quilez Hueso, I., University of Barcelona, Spain, 1 March-30 June.
Ribas, F., Aveiro University, Portugal, 1 September-31 December.
Ribó, M., ICM-CSIC, Barcelona, Spain, 15 March-15 July.
Rombouts, J., Delft University of Technology, 1 March-1 August.
Salvador Lluch M., Valencia University, Spain, June-December.
Schmidt, E., University of Munich, Germany, 11 June-31 December.
Schuster, A.K., University of Landau, Germany, 15 April-30 November.
Sharifan, H.R, University of Stuttgart, Germany, 2 April-30 September.
Smirre, H., University of Groningen, 1 February-1 March.
Smith, M., Australian National University, 11-29 June.
Splinter, W., Hogeschool Van Hall Larenstein, 4 July-19 October.
Thomas, E., Brown University, USA, 9 April-1 May.
Ubels, S., Utrecht University, 1 January-9 March.
van der Does, M., VU University, Amsterdam, 7 May-27 July, 10-31 December.
van der Ent, E., Utrecht University, 15 March-15 December.
van der Geer, D., University of Groningen, 1 January-1 July.
van der Kamp, M., Wageningen University, 1 September-31 December.
van der Linde, L., Hogeschool Rotterdam, Rotterdam, 19 November-31 December.
van Drie, R. Hogeschool Rotterdam, Rotterdam, 6 February-6 July.
van Gemert, M., University of Amsterdam, Amsterdam, 12-23 November.
van Oven, P., VU University Amsterdam, 1 January-31 May.
Verhoef, S., Utrecht University, Bachelor-project, 15 February-25 April.
Whalen, C., University of Amsterdam, 18 October-31 December.
White, C., University of Amsterdam, Amsterdam, 12-23 November.

External functions

P. van Avesaath

- PI of the Monitor taskforce of the NIOZ in VECTORS: Vectors of Change in Oceans and Seas Marine Life, Impact on Economic Sectors (European Project supported within Themes 2, 5, 6 and 7 of the European Commission Seventh Framework Programme)
- Working group leader, STSM coordinator and e-cost manager of the ESF COST Action ES 1003: EMBOS European Marine Biodiversity Observatory System.

K. Booij

- Member of the ICES Marine Chemistry Working Group.

H. Bolhuis

- External examiner, Hoogeschool Zeeland, 2012 – present.

T.J. Bouma

- coordinator NWO-ZKO project “Unraveling interacting feedback loops that control non-linear salt-marsh dynamics: combining experiments and modeling”
- leader work task 3.1 in EU-funded project “Innovative technologies for safer European coasts in a changing climate (THESEUS)”
- Dutch PI for the project “Relating ecosystem functioning and ecosystem services by mangroves: a case study on sediment dynamics” funded by SDWA (part-time appointed by Deltares)
- Dutch PI for the project “Towards designing innovative coastal protection using ecosystem-based approaches; deriving underlying ecological knowledge” funded by Building with Nature (BwN)
- Dutch PI for the project “Assessing the influence of human activities on ecosystem health and identifying indicators for nearness to system collapse: a case study on the Yellow River delta” funded by NWO & NSFC.

H. Brinkhuis

- Chairman LPP Foundation
- Board member Molengraaff fonds
- Member of the ERICON-AB Science Advisory Panel (2010 -)
- Member Sci Com Waddenacademie
- Board member EuroProx International Graduate School GEO Bremen-VUA-UU,
- Chair of The Netherlands IODP commission
- Member Scientific Committees International Paleogene Climate conferences 2001-current
- Voting-member of various IUGS commissions on Palaeogene stratigraphy
- co-director of the Urbino Summerschool in Palaeoclimatology (USSP)
- Guest-Lecturer University of Urbino, Southampton Oceanography Centre, University of California at Santa Cruz, Bremen University
- Member Editorial Board Marine Micropaleontology
- Member Editorial Board Journal of Micropaleontology
- Member Editorial Board The Netherlands Journal of Earth Sciences
- Member Editorial Board Bolletino della Societa Geologica Italiana
- Member Editorial Board EGU Climate of the Past.

G.J.A. Brummer

- Professor (Palae)oceanography and Geochemistry, Institute for Earth Sciences, VU University Amsterdam
- Member Steering Group GATEWAYS (EU-FP7, MC-ITN)
- Member of NEBROC2 steering group (NWO-DFG)
- Advisory member ESF-EUROCLIMATE programme
- Member NWO/ALW ‘Gebruikers-adviesgroep verankerde instrumentatie’
- Member Steering Group INATEX (NWO/ZKO-oceans).

T. F. de Bruin

- Chair - Netherlands National Oceanographic Data Committee (NL-NODC)
- IODE national coordinator for data management
- Member - OceanSITES Data Management Team
- Member – ICES Working Group on Data and Information Management (ICES-WGDIM)

- Member - Steering Committee of the Marine Metadata Interoperability (MMI) project
- Member - Southern Ocean Observing System (SOOS) Data Management Sub-Committee
- Acting Chief Officer – SCAR Standing Committee on Antarctic Data Management (SCADM)
- Co-Chair – CODATA Task Group on Governance of Polar Data
- Co-convenor of session: Accessing, Sharing and Preserving Data as a Legacy of IPY at IPY2012 Conference - From Knowledge to Action, Montreal, Canada, 22-27 April
- Convener of session: Data access and sharing for cutting edge science at 2012 SCAR Open Science Conference - Antarctic Science and Policy Advice in a Changing World. Portland, USA, 16-19 July.

C.P.D. Brussaard

- Editor FEMS Microbiology Reviews
- Coordinator NWO-ZKO 'Oceans' project 'STRATIPHYT'
- Member IABO – International Association Biological Oceanography
- Vice President of Scientific Committee on Oceanic Research (SCOR)
- Chair of Dutch SCOR Committee
- Vice President International Society for Viruses of Microorganisms (ISVM)
- Member Dutch Polar Research Committee (NPC).

G.C. Cadée

- Associate editor ICHNOS
- Editor Natura
- Lid commissie Geschiedenis der Aardwetenschappen (KNAW)
- Bestuurslid Historie van de Oceanografie Club (HOC).

G. Duineveld

- Member Steering Committee EU-CoralFISH.

F.C. van Duyl

- Lid stuurgroep Acropora net
- Lid TREUB MIJ
- Reviewer International Foundation for Science (IFS).

L.J.A. Gerringa

- Member Dutch Polar Research Committee (NPC)
- Member of the jury in the PhD defense of Maarten Klunder, Universiteit Groningen. 5 October, Groningen
- Member of the jury as "rapporteur" of the PhD defense of Marie Cheize, Université de Bretagne Occidentale: Cycle Biogéochimique due fer a l'interface Océan-Atmosphère: Spéciation organique du fer dans l'eau de pluie et son devenir après dépôt dans l'eau de mer. 18 December, Brest, France. Thesis supervision by Geraldine Sarthou.

J. Greinert

- Guest professor in Marine Geology, Ghent University, Belgium
- Member steering committee EMSO-PP (EU-FP7)
- Chairman COST Action ES0902 'PERGAMON' (EU-ESF).

H. de Haas

Lid NWO-ALW gebruikersadviesgroep bodembemonsteringssystemen en seismiek (GAG-BSS).

H. van Haren

- Member Institutional Board ANTARES neutrino telescope
- Member Strategic Board KM3NeT-PP/SC
- Chairman "ALW gebruikersadviesgroep Verankerde Instrumentatie"
- Chairman "ALW-GAGvoorzittersplus".

P.M.J. Herman

- Member Wadden Academy (until 31 August)
- Member Science Advisory Committee Plymouth Marine Laboratory
- Member Commission Monitoring Westerschelde
- President Peer Review Committee IFREMER lab "Dyneo" (AERES evaluation)
- Member selection panel of FCT (Portugal)
- Member board Schure Beyerinck Popping fund (KNAW)

- Member Program committee Netherlands Centre for Coastal Research
- Member Science Committee project Mosselwad
- Advisor to 'Vogelbescherming' in court case Westerschelde
- Member Scientific advisory committees for diverse EL&I projects in fisheries.

P.J. van den Hout

- Advisory Board of the Wadden Sea Flyway Initiative
- Advisory Board Bird Strikes
- Special Issue Officer International Wader Study Group
- Member of Huib Kluyver Fund.

H. Hummel

- Professor in Estuarine Ecophysiology, Institute of Oceanography, University of Gdansk, Gdynia, Poland
- President of the MARS Network, the European Marine Research Stations Network
- President of the European Marine Biology Symposium (EMBS) series
- Member steering committee WAMS (World Association of Marine Stations)
- General Coordinator (Action Chair) of the ESF COST Action EMBOS European Marine Biodiversity Observatory System
- Member Steering Committee EC 7th FW project EuroMarine
- Member of the steering committee of MarCom+: Towards an Integrated Marine and Maritime Science Community
- Member External Evaluation Board of LifeWatch Greece (HelBioNet)
- Member of the International Advisory Board of CORPI (Coastal Research and Planning Institute) at the Klaipeda University, Lithuania
- Member of the Management Board of the Erasmus Mundus Master of Science in Marine Biodiversity and Conservation – EMBC.

F.A. Koning

- Chair Ocean Facilities Exchange Group (OFEG)
- Member International Research Ship Operators (IRSO)
- Member European Research Vessel Operators (ERVO)

J. van de Koppel

- Affiliate professor at the University of Groningen.

J.C. Kromkamp

- Coordinator NWO-ZKO project "Consequences of Phosphorus reduction"
- International board member Group for Aquatic Primary Production (GAP)
- Team member consortium Interreg project "ISECA"
- Team member IMARES project "MosselzaadInvangInstallaties (MZIs)"
- Onderaannemer ECOBE groep in project "OMES" (Onderzoek naar de gevolgen van het Sigmaplan).

M. Lavaleye

- Member Steering Committee EU-CoralFISH.

J.W. de Leeuw

- Guest professor Faculty Geosciences, Utrecht University
- Guest professor Faculty Biology, Utrecht University
- Professor in Geosciences, King Saud University
- Professorship in Geochemistry University of Cataluna
- Member of the Royal Dutch Academy of Sciences (KNAW)
- Member of the Scientific Advisory Committee Plymouth Marine Laboratory (PML)
- Co-PI International Census of Marine Microbes (ICOMM)
- Chair Foundation "Zee in Zicht"/"Sea on Screen" (ZiZ/SoS)
- Geochemical Fellow ACS
- Member of the Scientific Advisory Council NCB/Naturalis
- Member SASEC committee IODP
- Chair SIPCom of IODP
- Co-Chair of GEO BON
- Member of the review committee CSIRO
- Member of the review committee TOP Program, NWO

- Member Scientific Advisory Board JIP (Joint Industrial Program).

P.C. Luttikhuisen

- Editorial Board of Journal of Sea Research.

L. Maas

- Part-time professor Physical Oceanography Utrecht University.

J. van der Meer

- Professor in Marine Population Ecology at the Institute for Ecological Sciences at the VU University Amsterdam
- Editor of ISRN Oceanography
- Chairman of the Netherlands Annual Ecology Meeting organization committee
- Chairman of the Third International DEB Symposium organization committee
- Member of the advisory board Natuurbehoud of the Prins Bernhard Cultuurfonds
- Member of the KNAW Schure-Beijerinck-Popping fund
- Member of the ICES working group SGIPEE
- Member of the ICES working group WKVHES.

F.J.R. Meysman

- Coordinator Darwin project 'HYPOXIA Grevelingen'
- Editor Journal of Marine Research
- Editor Biogeosciences
- Member Scientific Advisory Board, company OVIZIO
- NIOZ vertegenwoordiging TOPSECTOR water en energiedijken.

F. Mienis

- Guest editor Deep Sea Research II, special volume on Cold Corals.

T. Piersma

- Professor in Animal Ecology, and Chair of Animal Ecology Group (until 1 July 2012), and Professor in Global Flyway ecology (from 1 July 2012), at the Centre for Ecological and Evolutionary Studies (CEES) at the University of Groningen
- Editor of Journal of Avian Biology
- Editor of Functional Ecology
- Editorial board of Journal of Ornithology
- Editorial board of Movement Ecology
- Editorial board of Emu
- Vice-Président of the Conseil Scientifique of the Banc d'Arguin (CSBA), Mauritania
- Chairman of the Global Flyway Network, an international foundation
- Member of KNAW, Amsterdam.

C.J.M. Philippart

- Coordinator "Integrated Network for Production and Loss Assessment in the Coastal Environment" (IN PLACE) project
- Coordinator "Wadden Sea Long-Term Ecosystem Research" (WaLTER) project
- Member consultation team SEAS-ERA Atlantic research proposal
- Member SCOR Working Group 137 on "Patterns of Phytoplankton Dynamics in Coastal Ecosystems"
- Lecturer Marine Sciences, Biomarine Sciences Group, University of Utrecht.
- Convener workshop on "Public Perception of Climate Change" of the 2nd International Symposium on Climate Change, Yeosu, Korea, 14-19 May.

G.J. Reichart

- President of the Biogeosciences division of the European Geosciences Union
- Program Chair of the 2012 General Assembly of the European Geosciences Union
- Assistant Professor, Earth Science Department, Geosciences Faculty, Utrecht University
- Guest Senior scientist at the Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany.
- Member of the NWO-ALW gebruikersadviesgroepen "verankerde instrumentatie (GAG-VI), "bodembemonsteringssystemen en seismiek (GAG-BSS)" en "GAG-voorzitters-plus"
- Interim Member Steering Group GATEWAYS (EU-FP7, MC-ITN).

M.J.A. Rijkenberg

- Member of the Scientific Steering Committee of the international GEOTRACES program under aegis of SCOR/ICSU
- Associate member of the SCOR working group 139: Organic ligands – A key control on trace metal biogeochemistry in the ocean.
- Dutch representative in steering committee for organization of GEOTRACES transects in the Mediterranean and Black Seas.

S. Schouten

- Part-time professor Molecular Palaeontology, Faculty of Geosciences, Utrecht University
- Associate editor Organic Geochemistry
- Member of the scientific committee of NEBROC
- Member of the Netherlands Integrated Ocean Drilling Program Committee

J.S. Sinninghe Damsté

- Part-time professor Organic Geochemistry, Faculty of Geosciences, Utrecht University
- Member of the Royal Dutch Academy of Science (KNAW)
- Member of the KNAW council for Earth & Life Sciences
- Member of the Scientific Steering Committee of the Darwin Centre for Biogeology
- Associate editor Geochimica et Cosmochimica Acta
- Member of the Editorial Board Environmental Microbiology.

K. Soetaert

- Member of FWO commission (Fonds voor Wetenschappelijk Onderzoek), 2007-..., Belgium
- Member of the national Oceanographic Data Centre.

A. Stadnitskaia

- Editor-in-Chief of an Open Access online The Open Oceanography Journal; Bentham Open, ISSN: 1874-2521
- Member of European Geosciences Union
- Topical Editor of Earth System Science Data (ESSD) journal
- Convener of scientific session BG7.2 at the EGU General Assembly 2010 (Vienna, Austria, 2-7 May)
- Convener of scientific session 16i at the Goldschmidt Conference 2010 (Knoxville, Tennessee, USA, 13-18 June)
- Member of the Editorial board Marine Geology.

L. Stal

- Editor PlosOne
- Editor Annals of Microbiology
- Editorial Board The ISME Journal
- Editorial Board Frontiers in Aquatic Microbiology
- Coordinator EU-FP7 Project 'MaCuMBA'
- Coordinator NOW-ZKO project 'NICYCLE'
- Workpackage leader EU-FP7 project 'InteSusAI'
- Chairman Section Microbial Ecology of the Netherlands Society of Microbiology (retired in December)
- Chairman organizing committee of the 9th European Workshop on Molecular Biology of Cyanobacteria (Texel, 2014).

H.C. de Stigter

- Chairman NWO-ALW gebruikersadviesgroep "bodembemonsteringssystemen en seismiek (GAG-BSS)."

J.-B.W. Stuut

- Member editorial board Aeolian Research
- Coördinator INQUA Project (PASH2)
- Member Nederland IODP Commissie
- Member INQUA-Nederland bestuur.

D. Thieltges

- Associate Editor International Journal for Parasitology: Parasites and Wildlife
- Editorial Board of Journal of Sea Research
- Subject Editor for Marine Biology Research.

H.W. van der Veer

- Member of the ICES Working Group on Recruitment Processes
- Member Organizing Committee 9th International Symposium on Flatfish Ecology, Seattle, U.S.A.
- Guest editor Proceedings 8th International Symposium on Flatfish Ecology
- Guest editor Proceedings International Wadden Sea Symposium.

B. Vermeersen

- Associate Professor (0.7 fte) in Planetary Exploration, Astrodynamics & Space Missions, Faculty of Aerospace Engineering, TU Delft
- Chair of the Science Working Group of the Dutch Platform for Planetary Research NPP
- Chair of Working Group 4 on GIA Model Optimisation and Ice Mass Balance Computations of the EU/ESF COST ES0701 Initiative on Improved Constraints on Models of Glacial Isostatic Adjustment
- Principle Scientific Organiser of the EU/ESF COST ES0701 SLALOM2012 conference, Athens, Greece, 19-22 March
- Co-convener of session G3.1/CR1.80/GD3.11 on Glacial Isostatic Adjustment, Mantle Viscosity and Ice Sheet Fluctuations, EGU General Assembly, Vienna, Austria, 22-27 April.
- Chair NWO-ALW Commission for the Vening Meiningprijs 2012
- Editor of Geophysical Journal International
- Co-promotor PhD-thesis on Modelling Regional Sea-Level Changes in Recent Past and Future, Aimée Slangen, IMAU, Utrecht, 12 December.

L. Villanueva

- Member of the editorial board of International Microbiology Journal
- Scientific director and contributor of the Darwin Summer School of Biogeosciences- Perturbation of the carbon cycle. 1-13th July.

van der Wal, D.

- Coordinator RWS Bodemdierproject Westerschelde
- Project leader NWO/ALW-NSO Ecosystem Engineering of Shellfish
- Co-PI subproject Building with Nature – Galgeplaat, Oosterschelde
- NWO-ALW Scientific committee (jury) Open Competition Geo/Biology GB31
- Member 'Flexibel Stortoverleg' (subgroup Technical Schelde Committee)
- Member NIOZ Next
- Associate Editor Wetlands (Springer)
- Reviewer for journals (e.g. Journal of Geophysical Research)
- Reviewer for grants (e.g., National Science Foundation US).

Tj.C.E. van Weering (Sci. Emeritus)

- Professor Paleoceanography, Institute for Earth Sciences, VU University Amsterdam
- Chairman organizing committee 5th International Symposium Deep Sea Corals, The Netherlands, April 2012
- Member Programme Committee to the Scientific Programme Indonesia – Netherlands (SPIN) of the Royal Netherlands Academy of Arts and Sciences (KNAW)
- Member editorial board Boreas
- Member steering committee COCARDE/ESF
- Guest editor Deep Sea Research II, Special Volume on Cold Corals
- Advisor NWO-NIOZ regarding Caribbean Netherlands Science Institute at St. Eustatius
- Member Programme Committee Caribbean (NWO)
- Member program committee Netherlands Caribbean programme (NWO).

M.R. Wernand

- EARSEL representative.

Symposia

1. Koning, F.A., de Haas, H. International Marine Technicians Symposium, INMARTECH 2012, NIOZ, Texel, 25-28 September.
2. van Weering, T.C.E., Mienis, F. 5th International Symposium on Deep-Sea Corals, Amsterdam, 2-7 April.
3. International Marine and Sub-Marine Infrastructures Symposium, Toulon, France, 13-15 November.

Meetings

1. Active fluorescence intercalibration and algorithm validation. Chaired by Greg Silsbe, 12-14 June, 2012. This workshop brought together scientists from 6 European research institutes and two industrial partners to validate and implement new algorithms for measuring photosynthetic electron transport.
2. Active fluorescence measures of photosynthetic physiology and primary production (SS20). 11- August Special one day session during ASLO summer meeting, Otsu, Japan. Chairs: Silsbe, G., Kromkamp, J.C., Prasil, O., Fujiki, T. In this session new developments were presented using active fluorescence and optical techniques to measure phytoplankton photosynthesis. 2 invited lectures (J.J. Cullen, J.J. and Oxborough, K.).
3. Biotech Program GAP workshop. Chairs: Kromkamp, J.C. and Masojidek, J., Malaga, Spain, 16-26 September.
4. Bouimetarhan, I., Dupont, L., Stuut, J.-B., Itambi, C. Workshop on African climate-vegetation interactions, MARUM-PAGES workshop, Bremen, Germany, 4 -8 November.
5. Bouma, T.J. THESEUS project meeting in Hamburg (14-16 May).
6. Bouma, T.J. THESEUS project meeting in Rome (8-10 February).
7. Bouma, T.J. visited the Federal Institute of Hydrology (BfG), Department Ecological Interactions (U2) for meeting on joined flume experiments, 20-21 December, Koblenz, Germany
8. Bouma, T.J. visited the Forschungszentrum Küste (FZK), Hannover, Germany for a Hydralab project meeting, Hannover, Germany, 27 June.
9. Bouma, T.J. visited ZKO-conference, Den Haag, 7-8 November.
10. Bouma, T.J. ZKO-end user meetings in Groningen (13 December) and Yerseke (14 December).
11. Citclops kick-off meeting (EU-FP7), BDigital, Barcelona, Spain, 22-23 October (Wernand M.R., Novoa S.)
12. Cleroux, C. Benthic foraminifera, bio-indicator of natural and man-made methane/oil emission - COST-PERGAMON Mini-workshop at NIOZ, Texel, 26-29 June.
13. Cleroux, C., Reichart, G.-J., GATEWAYS steering committee meeting, NIOZ, Texel, 28-29 November.
14. De Jager, M., Kölzsch, A., Bartumeus, F., Hengeveld, G., Nolet, B. A., Herman, P. M. J., van de Koppel, J. Collisions drive Brownian motion in self-organized mussel beds. NAEM, Lunteren, 7-8 February.
15. ESF-COST EMBOS Management Committee meeting Hummel, H., van Avesaath P. Overview of first year activities on the European Marine Biodiversity Observatory System, Zandvoort, 24-25 May.
16. ESF-COST EMBOS WGOS workshop, Hummel, H., van Avesaath P. Outline of the survey on marine infrastructures and observatories, 17-19 January, Bremen, Germany.
17. ESF-COST EMBOS WGOS workshop, H. Humme, P. van Avesaath. Report of students working in the EMBOS action, Zandvoort, 24-25 May.
18. ESF-COST EMBOS WGOS workshop, Hummel, H., van Avesaath P. Establishing a network of marine biodiversity observatories, Zandvoort, 24-25 May.
19. ESF-COST EMBOS, EuroMarine WP5, LifeWatch DPP joint meeting, H. Hummel, P. van Avesaath, Outline for joint action on developing marine biodiversity indicators, 3-5 December, Lecce, Italy.
20. EuroMarine General Assembly Meeting (1), Hummel, H., van Avesaath P., Bremen, Germany, 18-19 January.
21. EuroMarine General Assembly Meeting (2), Hummel, H., van Avesaath P., Brussels, Belgium, Germany, 10-11 December.
22. EuroMarine WP2 meeting, van Avesaath, P., Hummel H. Electronic meeting on governance models (legal structure) of EuroMarine+ between participants at IFREMER, Paris, France and Yerseke, 29 November.
23. EuroMarine WP2 meeting, van Avesaath, P., Hummel, H., Paris, France, 3-4 May.
24. Greinert, J. MIDAS project proposal, EU project meeting, Paris, France, 5-6 September.

25. Greinert, J. PERGAMON "State of the Art Paper" writing meeting, Southampton, UK, 2-4 May.
26. Greinert, J. PERGAMON 5th Scientific workgroup meeting, Tromsø, Norway, 23-24 January.
27. Greinert, J. PERGAMON Work Group meeting, Ghent, Belgium, 5-7 November.
28. Greinert, J. Project meeting, FP7 proposal organisation, Brussels, Belgium, 20-21 March.
29. INMARTECH (International MARine TECHnicuans meeting) NIOZ, Texel, 25-28 September. INMARTECH is a biannual international meeting for marine technicians. 87 participants from 16 countries attended INMARTECH.
30. Kick-off meeting EU FP7-KBBE project MaCuMBA: Improved cultivation efficiency of marine microorganisms, 2012-2016. Timmermans, K.
31. MarBEF+ executive meeting, van Avesaath, P., Brussels, Belgium, 11 December.
32. Meysman, F.J.R. Session chair North Sea, ZKO-symposium, Parkhotel Den Haag, 7 en 8 november,
33. Mossels in de Waddenzee, Leeuwarden, Nederland, 19-20 November.
34. NACLIM kick-off meeting (EU-FP7), Barcelona, Spain, 6-8 November. (de Steur L.)
35. NIOZ "ARBO & Milieu" committee; meeting 4x per year. Brussaard CPD. Chair
36. PACE meeting, Progress on numerical modelling of Wadden Sea hydrodynamics and sediment transport with GETM/GOTM and Delft 3D, in conjunction with observational programs, was discussed with partners from Deltares, IOW Warnemünde, HZG Geesthacht a.o. NIOZ Texel, T. Gerkema, 12-14 September.
37. PROTOOL enduser meeting, chair: Simis, S and Kromkamp, J.C., 29-31 August, Helsinki, Finland. Demonstration of PROTOOL equipment and one day conference to water managers and other interested parties on water quality monitoring.
38. SCOR General Meeting, 21-23 October, Halifax, Canada. Brussaard, C.P.D.
39. SCOR-Netherlands annual meeting, 29 Augustus, Amsterdam. Brussaard, C.P.D.
40. Stal, L. MaCuMBA Kick-off meeting (General Assembly) (EU-FP7 RTD project). Eye Film Institute, Amsterdam, 29-30 October.
41. Stal, L. ~50 participants. Start of the project. Introduction participants. Review of the work packages and tasks. Key note lecture by Prof. Ian Joint. Presentation by Scientific Officer of the Commission. Discussion of various issues.
42. STRATIPHYT Post cruise meeting, Brussaard C.P.D., Mojica K., Timmermans, K., Vd Poll, Buma, A., Wored, H.J. van der, Kehoe, M., Huisman, J., Dijkstra, H.A., University of Amsterdam, Presentation of the results, 6 June.
43. Suykerbuyk, W., Bouma, T., Giesen, W., Govers, L., van Katwijk, M. The role of disturbances in the (re-)establishment in stressful environments: a case study on large scale, mechanical intertidal seagrass transplantations. 10th ISBW, Buzios, Brazil, 25-29 November.
44. The program consisted of 5 sessions: 'IN-SITU OBSERVATIONS', 'SEISMICS, ACCOUSTICS and TOWS', 'SHIPBOARD OPERATIONS', 'CABLES and CORING' and 'ODDS and SODS'. Furthermore the participants went on a short cruise with RV PELAGIA and RV NAVICULA.
45. THOR (Thermohaline Circulation at Risk?) Core Theme 3 Workshop, NIOZ, The Netherlands, 7-9 May. Final CT3 meeting 'Observations of the North Atlantic THC': presentations of finalized data sets, analysis, and interpretation. (H. van Aken, L. de Steur)
46. Trilateral Scientific Wadden Symposium, Leeuwarden, Nederland, 21-23 November.
47. Van de Koppel, J. Mosselworkshop within the 13th International Wadden Sea Symposium, Leeuwarden, 19 November 2012.
48. van der Wal various meetings, e.g., Mussel Meeting (University of Groningen - Marine Ecology and COCON and NIOZ Yerseke), Groningen, 30 August
49. VECTORS General Assembly Meeting, P. van Avesaath, Portoroz, Slovenia, 20-22 March.
50. Veuger, B., co-chair of session "Carbon and nitrogen stable isotope studies in aquatic ecosystems", ASLO Aquatic Sciences Meeting, Otsu, Japan, 8-13 July.
51. Waddenacademiesymposium, Den Oever, Nederland, 3-4 July

Courses

a. (Bi-)Annual/regular courses:

Course Marine Biology and Oceanography, 26 March - 14 April. Contact persons dr. Pieterella Luttikhuisen & prof. dr. Hein de Baar.

NIOZ 'Marine Master Course How does the sea work?', 2 - 14 July. Contact person dr. Henko de Stigter.

NIOZ Marine Masters Course 'Exploring the Wadden Sea'. Contact persons prof. dr. H. Ridderinkhof and dr. H.C. de Stigter.

Undergraduate course 'Marine Sciences-I', contact person Dr. Klaas Timmermans (NIOZ). Responsible for Biological Oceanography section, 24 - 25 September. Coordinator: dr. Appy Sluis (UU).

Undergraduate course 'Marine Sciences-II', contact persons Dr. Corina Brussaard (NIOZ), responsible for Biological Oceanography section. Coordinator: dr. Appy Sluis (UU).

Course 'Experiments in Limnology and oceanography'. Master students University of Amsterdam (UvA). Practical training at NIOZ: 12 - 24 November and 26 November - 7 December . Contact person dr. Corina Brussaard (NIOZ). Coordinator: Prof. Jef Huisman (UvA).

Advanced Marine Surveying for Science and Industry, Multibeam mapping course for masters students from Ghent University, Belgium. Contact person dr. J. Greinert.

Environmental modelling in R, Yerseke. Contact: K. Soetaert and F. Meysman

Biogeochemical modeling in aquatic environments: using R as a simulation environment. NIOZ, Yerseke. Sept 2012 (1 week – 40 hr), 20 students. Contact person prof. dr. ir. Filip Meysman.

WE-DBIO-9171 Ecosystem modelling (4 ECTS), 2de MSc ECOMAMA, joint master Vrije Universiteit Brussel - Universiteit Gent – Universiteit Antwerpen (co-titularis with K. Soetaert).

WE-DBIO-14373 Environmental modeling (4 ECTS), 1ste MSc Oceans & Lakes, joint master Vrije Universiteit Brussel - Universiteit Gent – Universiteit Antwerpen (co-titularis with K. Soetaert)

WE-DBIO-14389 Applied Mathematics and Statistics (6 ECTS), MSc Oceans & Lakes, joint master Vrije Universiteit Brussel - Universiteit Gent – Universiteit Antwerpen (co-titularis with M. Elskens)

WE-DSCH-14655 Modelling of the environment (6 ECTS), MSc Chemistry, joint master Vrije Universiteit Brussel - Universiteit Gent (titularis)

Global Change and Coastal Hazard Mitigation, University Antwerpen

b. Irregular courses:

Nebroc and Ecolmas PhD course, "Molecular Organic Biogeochemistry", 23 - 28 September.

The course was organised by Stefan Schouten in collaboration with several members of the BGC department. The course consisted of lectures given by Stefan Schouten, Jaap Sinninghe Damsté, Jan de Leeuw, Ellen Hopmans and Marcel van der Meer. The topics covered included instrumental techniques, biomarker lipids, organic proxies, kerogen formation, stable isotopes and radiocarbon isotopes and intact polar lipids. In addition to the lectures there were demonstrations of analytical equipment at the BGC lab and working group sessions led by BGC department members on the interpretation of analytical data. The day was ended by student presentations in which PhD students briefly presented their (future) research project. The course was attended by 6 NIOZ students and 18 external students from countries such as Germany, Switzerland, UK, Turkey, and Brazil.

Darwin Summer School of Biogeosciences- Perturbation of the carbon cycle. 1 - 13th July. Utrecht/Texel. L. Villanueva, Scientific director and contributor.

The second edition of the Darwin Summer School was held from the 1-13 July both in Nyenrode and Texel. This summer school gave an overview of the state of the art research within the field of Biogeosciences. Main subjects were ocean acidification, the carbon cycle, microbial ecology, biomarkers, terrestrial carbon cycling and climate reconstruction. Both lectures and practicals were given.

Lecturers: J. Middelburg, M. van den Broecke, A. Sluijs, G. Ganssen, L. Lourens, C. Slomp, C. Richardson, C. Hoorn, H. Hoogshiemstra, H. Dolman, P. Bodelier, K. Ettwig, R. Laanbroek, H. de Baar, S. Schouten, E. Hopmans, L. Villanueva, M. van der Meer, F. Stams, L. Stal, L. de Nooijer, K. Koho, and J. Reumer

Advancing food web reconstruction by merging observations with linear inverse modeling. Joint ART-APECS Science Workshop. Sopot, Poland, 23-26 October.

Lecturers: van Oevelen D., Moritz, C.

Experiments in Limnology and Oceanography University of Amsterdam, 12-23 November.

Lecturer: C Hornlein.

SGONS/INSS Workshop , in collaboration with PML-Plymouth, UK, 12-15 November.

The NIOZ nutrient laboratory has organised a workshop/course to standardize the protocols for working with Auto-Analyzers, with emphasis on the analysis of phosphate. The course was attended by 8 of the most renowned marine nutrient analysis laboratories.

Organizers: Karel Bakker, Sharyn Crayford, Jan van Ooijen.

Public Outreach Activities

1. CIEE Research Station Bonaire. Issue 23. 2012. Report by Dr J. Claydon about the work of NIOZ-PhD B. Mueller at Bonaire about excavating sponges.
2. NIOZ-Contribution to scripts for children programs (Klokhuis) about sponges and corals programs.
3. Radio. About the decline of the coral reefs of the Great Barrier Reef. F.C. van Duyl (date, programme, time, cannot remember).
4. 7 Nov 2012. Curacaoan newspaper AMIGOE. Reefs will die with development of Oostpunt on Curacao. R.P.M. Bak.
5. Reef Reminiscences "Ratcheting back the shifted baselines concerning what reefs used to be" United Nations University. Contribution by R.P.M. Bak. Deep or shallow, depending on the winds. pp18-19. UNU-INWEH
6. Slingerbewegingen in de diepten van de oceaan; Kennis uit de hangmat: golven voelen, de Volkskrant, 28 July 2012.
7. NIOZ: interne golven komen voor bij strand, Texelse Courant, 16 March 2012.
8. Publiekslezing: Sinninghe Damsté, J.S. Voorspellende fossielen. Over klimaatverandering. Spinoza te paard, Den Haag, 18 December.
9. Radiouitzending: Sinninghe Damsté, J.S., HoeZo vandaag: palmen op de Noordzee, 24 september.
10. De Groene Amsterdammer : de 10 grootste doorbraken in de wetenschap, Mei 2012.
11. Jaap Sinninghe Damsté: Temperatuurgeschiedenis van de aarde
12. Marcel van der Meer: Klimaatreconstructies.
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17. Booij, K. Stagemogelijkheden bij NIOZ Koninklijk Nederlands Instituut voor Zeeonderzoek. Sollicitatiedag Hogeschool InHolland, Amsterdam, 15 February
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35. Meysman F.J.R., Krantenartikel NRC handelsblad (nav ERC project)
36. Meysman F.J.R., Labyrint Radio, het wetenschapsprogramma van VPRO en NTR, centrale praatgast radio interview (11 november 2012)
37. Van Oevelen D. Participation in a documentary on national television (VPRO – Labyrinth) on the role of sponges in tropical reefs. 31 October
38. Van Oevelen D. Participation in a popular program on national television for children ("NPS – Klokhuis") on doing marine research in tropical reefs. 21 November
39. Omroep Zeeland - TV en radio item over overlast van wieren in Veerse Meer. Wier Veerse Meer zorgt voor overlast. Interview 16 Juli
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44. Kromkamp, J.C. TV interview RTL4, i.v.m. toxische alg, 7 augustus.
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Public Outreach 2012

NIOZ public outreach efforts in 2012 have been made by individual scientists and by the Communications Department. NIOZ has been reported more than 400 times in newspapers, magazines, television, radio and internet media with a potential viewer equivalent of about 130 million viewers. In total more than 200 reports were made in national media, 68 of which in national newspapers. In the following chapter a few highlights will be mentioned.

Not counting in the figures above is the media hype around the stranding of a living humpback whale and a dead sperm whale three days after each other, at the end of December. These events were good for almost 300 times NIOZ was mentioned in the media. NIOZ was involved with facilitating with a ship during the first days and later NIOZ offered the harbour for dissection of both whales. It is rare a humpback whale strands alive in the Netherlands and the emotions ran high in the media, resulting in a huge amount of articles.

In January, the transportation of four labcontainers, made by NIOZ among others, to Antarctica attracted the attention of a lot of media. They were shipped for use in the next Antarctic summer as the first Dutch laboratory at Antarctica, based at the English base Rothera. The concept of a kind of docking station, where you can plug in several containers, is innovative and makes it possible to change laboratories quite easily.

In April, the merge between NIOZ-Texel and the former CEME-NIOO in Yerseke was celebrated with the presence of the Prince of Orange, Willem-Alexander. During this event NIOZ gave a brief impression of their kind of research. The Prince was quite impressed, like a lot of other people present. Especially regional media mentioned this royal visit a lot with, for example, nice footage from *TV Zeeland*.

The edges of the salt marshes in the Gulf of Mexico have been eroding more quickly since the Deepwater Horizon oil spill in 2010, and parts are lost permanently. The erosion was caused by a combination of marsh compaction and acute oil contamination. This was the outcome of research that was published in the American Journal PNAS, and most Dutch national newspapers spend an article about it. The research was carried out by an American-Dutch research team. It is remarkable that the additional threat of the oil spill immediately caused a loss of salt march. It could be that the Dutch coast will also get more vulnerable when the sea level rises.

About 50 million years ago, the Antarctic summer was subtropical, winter temperatures were above freezing and there was a tropical rainforest on the coast. These were the remarkable results of a research cruise to eastern Antarctica aboard a drilling vessel. The international research team, led by NIOZ-director Henk Brinkhuis, had published their results in *Nature*. During this expedition, they drilled through the ocean floor and hauled up 50-million-year-old sediment. Analysing these sediment samples, they found large concentrations of pollen grains from tropical and subtropical plants, such as palms, baobab and tropical fruit and nut trees. These species all grow within a specific temperature range and are certainly not frost-hardy. Probably this tropical climate was due to the higher concentrations of carbon dioxide in the atmosphere. Almost all the national newspapers published an article about these findings.

At the start of the October Knowledge –month, NIOZ-Texel organised an Open Day at the harbour. All the ships were at home. People could visit those ships, see what kind of organisms live in the harbour and in the Waddensea, visit several demonstrations of ship-related research, have a look in the

storage-buildings, see what kind of research-equipment is used at sea, etc. For children, there were special activities, such as crab-fishing, a trip with the *Stern*, and being made up like a sea-creature. This Open Day was very well mentioned in the media, from the local *Texelse Courant* till the national newspaper *Telegraaf*, which spend almost a full page to NIOZ. The Open Day was very well visited by more than 1400 people.

Two researchers did a nice job at a primary school with explaining their research. They gave the children also a plastic cup, which they painted with their own print. These cups were taken out with the *Pelagia* and went under water together with the research equipment. Afterward, the schoolchildren got their own cup back, now a lot smaller, due to the enormous water pressure. The children were very impressed and realised the challenge of the researchers to make their equipment pressure-proof.

About 25 non-scientific groups visited the NIOZ and got a special tailor made programme. Most groups got a special programme with a lecture of one or several scientists, beside an introductory lecture, and often a guided tour.

Sociaal verslag

CAO-onderzoekinstellingen

Na hervatting van de CAO onderhandelingen in november 2011 is op 20 april 2012, na drie onderhandelrondes, met de werknemersorganisaties AC/FBZ, WAWO/CMHF en CNV Publieke Zaak een akkoord bereikt over de nieuwe CAO voor de onderzoekinstellingen. Het akkoord is gebaseerd op het onderhandelingsresultaat van 1 februari 2012. Dit onderhandelingsresultaat werd, na achterbanberaad, door Abvakabo FNV als onvoldoende beoordeeld zodat het CAO-akkoord van 20 april 2012 niet ondertekend werd door Abvakabo FNV.

Afspraken CAO-OI 2010-2012

De looptijd van de CAO is van 1 juli 2010 tot en met 31 december 2012 en voorziet in afspraken over werkzekerheid en in een structurele loonsverhoging van 1%.

De CAO bevat de volgende hoofdpunten:

- De aan leeftijd gebonden regelingen, te weten de leeftijdsdagen, de Seniorenregeling Onderzoekinstellingen en de 60+-regeling, zijn afgeschaft onder bepaalde afbouw-en garantieregelingen.
- Naast de per 1 februari 2012 toegekende structurele loonsverhoging van 1% is in de maand juni 2012 aan iedere werknemer een eenmalige koopkrachttoelage over 2011 toegekend van € 250,- bruto. In juli 2012 is een incidentele uitkering van 0,5% van een half bruto jaarsalaris toegekend met als peildatum 1 juli 2012, uit te betalen als een bedrag in één keer.
- Voor 2012 is door de werkgevers een werkzekerheidgarantie gegeven: in 2012 wordt in geval van organisatieveranderingen niemand ontslagen.
- Voor reorganisaties die in 2012 en 2013 worden gestart is een resultaatverplichting overeengekomen die inhoudt dat alle inspanningen erop gericht zullen zijn dat werknemers van wie de functie door organisatieveranderingen komt te vervallen, intern of extern worden herplaatst in een passende functie.
- Werken na 65 jaar moet mogelijk zijn. Uitgangspunt is dat ieder dienstverband eindigt bij het bereiken van de AOW-gerechtigde leeftijd, waarna er geen verplichting is, maar een mogelijkheid wordt geboden om door te werken als werkgever en werknemer dat beiden willen.
- Er is de mogelijkheid om op basis van specifieke criteria (groepen) werknemers op initiatief van de werkgever aan te wijzen voor wie een (betaalde) arbeidsduur van 40 uur geldt en een jaarlijkse vakantieverlofaanspraak van 234 uur. Deze werknemers ontvangen een toeslag op hun salaris ter waarde van de 104 ingeleverde verlofuren.
- Werkgever en werknemer kunnen overeenkomen dat de werknemer een functie gaat vervullen, passend bij zijn levens- en ontwikkelingsfase, die op een lager functieniveau is gewaardeerd dan het voor hem tot dan geldende functieniveau. Er is een compensatieregeling afgesproken van maximaal twee jaar voor de werknemer die daarbij een bezoldiging ontvangt die lager is dan de oude bezoldiging.
- Partijen voeren een gezamenlijke studie uit naar modernisering van de CAO.

De looptijd van de CAO is op 31 december 2012 verstreken. Doordat de CAO door geen van de partijen is opgezegd, is deze automatisch met een jaar verlengd.

Arbeidsvoorwaarden op maat (AVOM)

Van de (fiscale) woonwerkvergoeding hebben in 2012 276 medewerkers gebruik gemaakt waarmee een, voor werkgever NIOZ financieel neutraal bedrag was gemoeid van € 211.796,-

De overige AVOM-doelen zijn als volgt verdeeld:

verkoop verlofuren	134 medewerkers
koop verlofuren	7 medewerkers
fietsen	36 medewerkers
vakbondscontributie	17 medewerkers

Individueel Klachtrecht

Koninklijk NIOZ beschikt over een regeling Individueel Klachtrecht. Deze regeling biedt werknemers de mogelijkheid om klachten over een gedraging door of vanwege de werkgever bespreekbaar te maken en te laten onderzoeken. In 2012 zijn er bij de Klachtadviescommissie geen klachten ingediend.

Buitenlandse werknemers

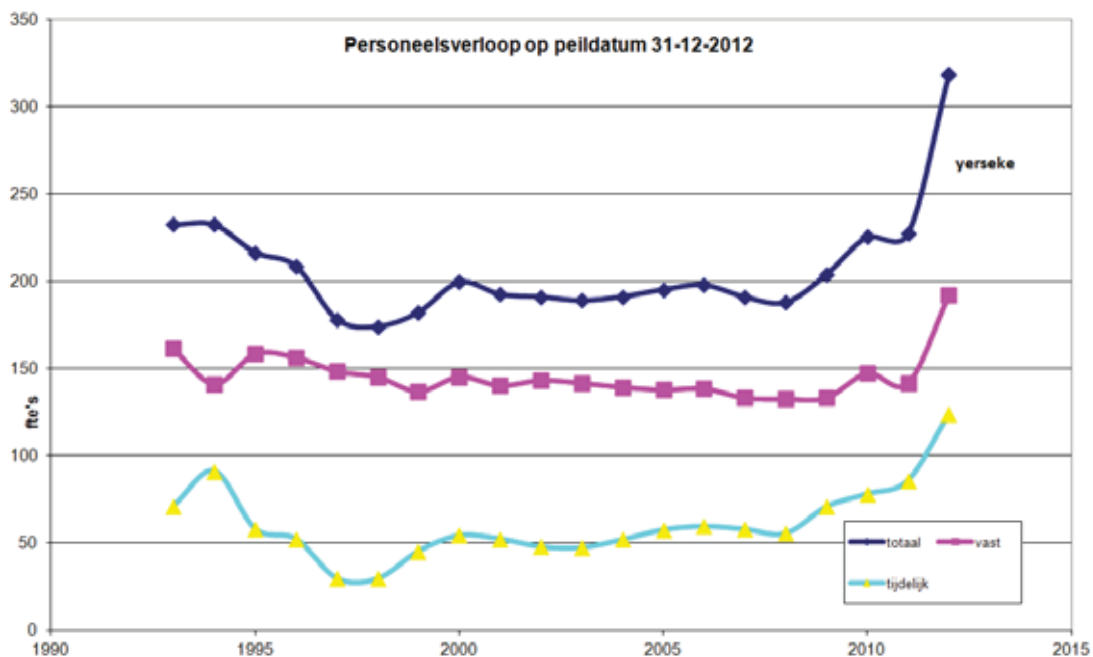
De internationalisering van het wetenschappelijk onderzoek blijkt ondermeer uit het aantal buitenlandse werknemers dat op de locaties Texel en Yerseke in 2012 in loondienst werkzaam is geweest. Het totaal aantal komt neer op 89 medewerkers, verdeeld over 33 mannen en 56 vrouwen (circa 25% van het personeelsbestand). Mondiaal waren 22 nationaliteiten vertegenwoordigd.

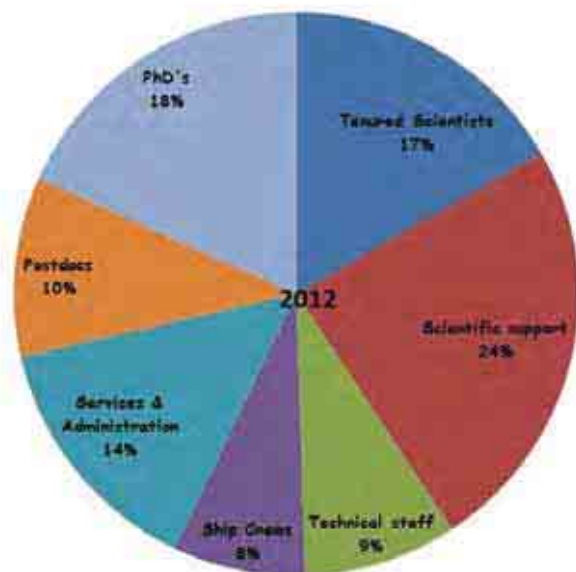
Opleiding en training

Aan scholing, inzetbaarheid, loopbaanvorming en deelname aan congressen en symposia is in 2012 een percentage van 1,81 van de loonsom besteed.

Van de in totaal 4 leergangen management in onderzoeksorganisaties waaraan de groep "NIOZ next" heeft deelgenomen, werden er in 2012 op externe locaties 2 leergangen gehouden. De overige leergangen volgen in 2013.

Het management van het NIOZ heeft in 2012 een integriteitstraining gevolgd waarbij het accent met name lag op het continu bewust zijn op integer handelen.





Arbo en milieu

Inleiding

In dit verslag wordt gerapporteerd over de belangrijkste activiteiten op het terrein van arbo en milieu, die in 2012 hebben plaatsgevonden.

Beleid

Met ingang van dit jaar is het Arbo en Milieu werkgebied uitgebreid met de vestiging Yerseke. De taken die voorheen in de uitvoer lagen bij de KNAW zijn nu overgenomen door NIOZ Texel. Doel voor het komende jaar is om het Arbobeleid zo veel mogelijk af te stemmen en samen te voegen. Met betrekking tot de Risico Inventarisatie en Evaluatie wordt er, vanwege de doorlopende renovatie van het gebouw, vooraf aan de uitvoering van de werkzaamheden en inrichting advies gegeven over de arbo- en milieuaspecten. Voor de bouwdelen die recentelijk binnen NIOZ Texel gerenoveerd zijn, zoals de bouwdelen Fysische Oceanografie en Mariene Geologie is er in het najaar een RI en E uitgevoerd. Voor de afdeling Biologische Oceanografie en voor de NIOZ vestiging Yerseke zal dit begin 2013 opgestart worden.

Dit jaar heeft de ArboNet commissie gewerkt aan het afronden van de arbo catalogus. De zes hoofdstukken zijn: Beeldschermwerk/RSI, Elektriciteit, BHV, Psychosociale arbeidsbelasting, Ver- en Nieuwbouw werkzaamheden en Binnenklimaat. Eerstvolgend hoofdstuk wat toegevoegd zal worden heeft betrekking op het werken met gevaarlijke stoffen.

Arbo- en Milieucommissie

De Arbo- en Milieucommissie heeft een adviserende en signalerende taak naar de directie en ondernemingsraad op het gebied van veiligheid en milieu. De commissie is breed van samenstelling, vanuit verschillende geledingen en afdelingen, zowel Texel als Yerseke. Afgelopen jaar is er bij voorbeeld een presentatie gemaakt voor nieuw personeel en input gegeven aan de procedure Invasieve diersoorten. Tevens zal er een procedure worden opgezet voor het alleen werken en voor thuiswerken.

Trainingen

In 2012 zijn er binnen het kader van voorlichting en onderricht verschillende trainingen gegeven voor het personeel. Voor de medewerkers van de technische afdelingen is er een training VCA gegeven en voor medewerkers die werken aan elektra de cursus NEN 3140. Voor de afdelingshoofden is een algemene Arbo training gegeven en voor de medewerkers binnen de laboratoria de training Veilig werken in een laboratoriumomgeving.

Ongevallen

Het afgelopen jaar zijn er de volgende ongevallen voorgevallen. Een medewerker aan boord van één van de onderzoeksschepen heeft zijn enkel gebroken tijdens het afdalen van de trap. Na onderzoek van o.a. de arbeidsinspectie is er geen directie oorzaak vastgesteld.

Een andere medewerker aan boord van een extern onderzoeksschip heeft een middenhandsbeentje gebroken tijdens het binnenhalen van apparatuur. Zijn hand kwam klem te zitten tussen de haspeldommel en het frame. Door tijdig ingrijpen werd erger voorkomen. Oorzaak was het nog snel even inspecteren van een kabelconnector tijdens het inhalen. Daarnaast waren er een drietal kleinere ongevallen te melden o.a. kleine snijwonden en een kneuzing.

Veiligheid- en milieuzaken

Texel: na de renovatie van het voorgaande jaar, met de daarbij grote opruimactie van het afvoeren van chemicaliën, zijn er dit jaar nog geen chemische afvalstoffen afgevoerd. Reguliere afvalstoffen als afgewerkte olie en plastic werden wel regelmatig aangeboden voor o.a. recycling.

Yerseke: hier is het afgelopen jaar o.a. afgevoerd aan "zwaar" chemisch afval 34kg, "laag" chemisch afval 400kg, kwikhoudende afvalstoffen 1kg, formaline 1250kg.

Bedrijfsgezondheidszorg

De opvarenden van de schepen en de leden van de bedrijfsbrandweer zijn dit jaar weer periodiek gekeurd en geschikt bevonden. Ook zijn er keuringen verricht voor personeel dat voer op buitenlandse schepen.

BHV organisatie

De organisatie Texel bestaat uit een tweetal onderdelen, bedrijfsbrandweer en EHBO. Het EHBO team bestaat uit 10 leden evenals de bedrijfsbrandweer. Voor het komende jaar zullen de beide organisatievormen overgaan in één BHV organisatie.

De BHV organisatie in Yerseke bestaat uit 12 leden.

Om de inzetbaarheid van de leden van de BHV te garanderen zijn er de afgelopen jaar diverse trainingen en cursussen gevolgd.

Ziekteverzuim

Ten opzichte van het ziekteverzuim in het jaar 2011 is het verzuim in 2012 met 0.2% toegenomen (van 3.8% naar 4%). Evenals in 2011 worden de toename en het percentage voornamelijk veroorzaakt door een continu aantal langdurig zieke medewerkers.



Jaarverslag 2012 van de ondernemingsraad Koninklijk NIOZ

De opzet en samenstelling van de ondernemingsraad heeft dit jaar een grote wijziging ondergaan wegens de fusie tussen NIOZ en NIOO-CEME (Yerseke). In overleg is besloten de OR uit te breiden met drie leden van (thans) NIOZ Yerseke, naast de acht leden van NIOZ Texel. Dit weerspiegelt de verhouding van de personeelsaantallen in beide vestigingen. Hiermee komt het totaal aantal leden op elf. Dit alles is vastgelegd in een nieuw Reglement.

Verkiezingen vonden plaats in mei. In de vestiging NIOZ YE werden gekozen: *Henk Bolhuis* als vertegenwoordiger van de groep vaste en tijdelijke onderzoekers (tevens plv. voorzitter); *Loran Kleine Schaars* als vertegenwoordiger van de groep onderzoek- en laboratoriummedewerkers; *Yvonne van der Maas* als vertegenwoordiger van de groep medewerkers van de ondersteunende diensten, stafeenheden en overig.

Aftredend in de vestiging Texel waren Maarten Mulder (vertegenwoordiger van de groep onderzoeks- en laboratorium medewerkers), Corina Brussaard (vertegenwoordiger van de groep vaste onderzoekers); Klaas Kikkert (vertegenwoordiger varend en havenpersoneel) en Isabelle van der Star (vertegenwoordiger van de groep tijdelijke medewerkers). Gekozen als opvolgers zijn respectievelijk: *Sander Holthuijsen*, *Henk de Haas*, *Ewout Adriaans* en *Cees van Slooten*. Herkozen werden *Ruud Witte* (vertegenwoordiger van de groep medewerkers van de technische diensten, centrale diensten en stafeenheden, tevens plv. secretaris) en *Theo Gerkema* (vertegenwoordiger van de groep vaste onderzoekers, tevens voorzitter). Tevens zijn er de zittende leden *Sander Asjes* (vertegenwoordiger van de groep medewerkers van de technische diensten, centrale diensten en stafeenheden) en *Swier Oosterhuis* (vertegenwoordiger van de groep onderzoeks- en laboratorium medewerkers). De laatste heeft het secretariaat overgenomen van Maarten Mulder.

Op 9 februari, 12 april, 24 mei, 5 juli, 27 september, 6 december hebben formele overlegvergaderingen met de directie plaatsgevonden, en op 31 mei en 29 november met het bestuur. De notulen van de vergaderingen zijn te lezen op de NIOZ intranet webpagina van de ondernemingsraad. Er zijn daarnaast diverse informele overlegvergaderingen met de directie.

De ondernemingsraad heeft positief geadviseerd aangaande de aanstelling van de nieuwe bestuursleden Prof. Olsen en Prof. Vincx.

Jaarverslag Personeelsvereniging NIOZ (PV)

Onze eerste activiteit in 2012 bestond uit een Pokerworkshop. Hiervoor was veel animo; er kwamen die avond ongeveer 30 deelnemers die graag wilden leren poken. Na een uitleg en oefenronde werden geest en lichaam gesterkt met een maaltijd. Vervolgens werd het toernooi gestart waarbij onverwachte pokertalenten en pokerfaces naar voren kwamen.

Rond de paasdagen was het tijd voor het kinderfeest. Ongeveer 25 kinderen en kleinkinderen van NIOZ medewerkers hebben tijdens het feest een vogelhuisje versierd en een insectenhotel gemaakt. Als hoogtepunt van het programma hebben we in de buitentuin bij prachtig weer vers gebakken pannenkoeken gegeten.

Na de zomervakantie was er een gezellige back to work BBQ. Ook dit jaar was het ellendig weer tijdens die BBQ, maar in de loods zaten we droog en vooral gezellig. In december hebben twee PV-pieten een wijn uitschenk cadeautje van de Sint uitgedeeld. Dit werd leuk ontvangen.

Samen met zo'n 30 collega's uit Yerseke hebben we het jaar afgesloten met een muzikale kerstborrel. De muziek werd verzorgd door de band "Polkanaria", met een repertoire van wereldmuziek. Later op de avond nam de DJ het over en werd het jaar dansend afgesloten.

Dit jaar is het PV-bestuur onderbezet geraakt. Isabel, Felicia hebben het NIOZ verlaten en Danielle heeft het te druk met haar werkzaamheden in het lab. Ik wil ze graag bedanken voor hun inzet tijdens de afgelopen periode. Er zijn dus vacante posities voor het bestuur van de PV. Vrijwilligers gevraagd!

De PV-voorzitter,

Elda Panoto