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

www.nioz.nl

NIOZ Texel
Visiting address:
Landsdiep 4
1797 SZ 't Horntje, Texel

Postal address:
P.O. Box 59
1790 AB Den Burg, Texel
The Netherlands
Telephone: +31(0)222 - 369300
Fax: +31(0)222 - 319674

NIOZ Yerseke
Visiting address:
Korringaweg 7
4401 NT Yerseke

Postal address:
P.O. Box 140
4400 AC Yerseke
The Netherlands
Telephone: +31(0)113 - 577300
Fax: +31(0)113 - 573616

The mission of NIOZ is to gain and to spread scientific knowledge on estuaries, coastal 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 in Europe.

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-2014

This annual report was produced under the responsibility of the director Henk Brinkhuis

Realization:
Marianne Baas, Judith van Bleijswijk, Jan Boon, Taco de Bruin, Veronique Confurius, Joke van Houte, Kees Campuijsen, Henko de Stigter, Marcel Wernand, Sander Wijnhoven

Lay-out:
Nelleke Krijgsman

Interviews:
Joop Rommets - 'journalist en tekstschrijver'

Photo:
Front cover: Micha Rijkenberg
Back cover : Taco de Bruin

Printed by:
Zeeman Reclamegroep, Den Helder

ISSN: 0165-9162

ANNUAL REPORT 2014

ROYAL NETHERLANDS INSTITUTE FOR SEA RESEARCH

DELTA

INTERTIDAL

COASTAL

OPEN OCEAN

TROPICS

LABORATORY

SUPPORT

INTERVIEWS

OUTREACH

SUSTAINABILITY

FACTS & FIGURES

NIOZ 2014:
High waves and rocky shores

Gaining insight in the complex and ever changing marine ecosystems and environments from the deep oceans to the shallow deltaic coastal settings is of vital importance for modern society. Our mission, activities, multidisciplinary research, including frontier applied studies, modern research facilities, labs, and research vessels, and network of cooperating national and international universities and institutions are all dedicated to this task. Furthermore, NIOZ supports academic and applied marine and maritime research with know-how and infrastructure in the Netherlands and abroad.

In 2014, research at Royal NIOZ continued to focus on marine environments globally, in estuaries and deltaic settings, from polar regions via temperate zones to tropical coral reefs and sea-grass fields, and into the depths of the oceans. Royal NIOZ is a respected and trusted partner in a multitude of national and international efforts to improve our understanding of the changing seas and oceans, and for paving the way to improved and sustainable use of them in terms of coastal protection ('building with nature'), global food, energy and other natural resources for broad scientific and societal benefit.

2014 was in many respects a dynamic year for the institute, with high waves, rocky shores, and many highs and lows. The institute was faced with serious budgetary issues, and the troublesome times led to a change of the NIOZ board. A new NIOZ board was installed on October 1, composed of Ir Harry Baayen (chairman), and Dr Ir Bas Buchner, Prof Dr Jack Middelburg and Drs Luc Kohsiek. Central in 2014 was addressing the problems, and moving forward with a visionary plan A new course for NIOZ, composed by the board and directorate under the guidance of Harry Baayen. A key element in our approach was to find co-investors in the scientific efforts of NIOZ, and in this context, a crucial agreement between NIOZ, NWO and Utrecht University was reached in late 2014. This new collaboration and affiliation will eventually allow significant new investments in fundamental marine sciences for the coming decade, while our national role remains unchanged.

MUST directors Tammo Bult (IMARES), Henk Brinkhuis (NIOZ) and Jan Hoegee (TNO) address the audience at the MUST symposium in Amsterdam.

Other elements of the plan were an improved financial control and transparency, a new role for NIOZ Yerseke to be developed in a regional Delta context, and avenues to secure NIOZ's sea going national marine research facilities. The latter effort led to a report by a committee headed by Ir Hans Huis in 't Veld, the CEO of the national economic 'Top Sector Water', confirming the important, and to be sustained, national role of NIOZ MRF and seagoing capability. 2015 is a transitional year in the plan, with adaptation of the organisation, with a planned start of NIOZ 'new style' in January 2016. Another aspect was improving the collaborations in the frontier applied marine and maritime scientific domain, by the formation of the Netherlands Maritime consortiUm for environmental Science and Technology, MUST, with Deltares, IMARES-WUR and TNO as partners.

Meanwhile, NIOZ scientific productivity in 2014 reached a record highs with over 300 peer reviewed publications, 165 open access papers, 6 successful PhD thesis defences at three universities, and over 550 outreach, broad scientific, and media contributions. It was also the year where NIOZ was very successful in the various national NWO/STW 'top sector' calls, and where Prof Dr Theunis Piersma, one of the senior PIs of the marine ecology department (TX), and affiliated with Groningen University, received the prestigious personal NWO/OCW Spinoza award, the largest of its kind in the Netherlands. Moreover, Prof Dr Ir Jaap Sinninghe Damsté, head of NIOZ's marine organic biogeochemistry department (TX) and also Spinoza laureate in 2004, received the equally prestigious, personal academic Dr. A.H. Heineken prize for environmental sciences this year in recognition of his contribution to the field.

Other notable achievements in 2014 included professorship appointments of Dr Klaas Timmermans (NIOZ-TX; chair: marine plant biomass) and Dr Tjeerd Bouma (NIOZ-YE; chair: biomorphological changes and ecosystem services of coastal areas) at the Groningen University, and a professorship of Dr Bert Vermeersen (chair: planetary exploration) at Delft University. Furthermore, we celebrated a NWO-VIDI grant for Dr Dick van Oevelen (NIOZ-YE), and a VENI grant for Dr Kimberly Mathot (NIOZ-TX), but also the signing of a Memorandum of Understanding with MARUM (Bremen University, Germany) at the Hannover Messe in the presence of deputy minister of Education, Culture and Science (OCW) Sander Dekker.

Cheers on the signing of the MoU between MARUM and NIOZ at the Holland High Tech stand at the Hannover Messe.

Another 2014 highlight was the Royal opening of the new seaweed research centre by HRH King Willem Alexander of the Netherlands in April. It was a day of celebration of NIOZ's innovative scientific capabilities towards a sustainable blue economy. Later that month, festivities continued in the Caribbean with the official opening of the Caribbean Netherlands Science Institute at St Eustatius, 'enabled by NIOZ', with funding from the ministry of OCW.

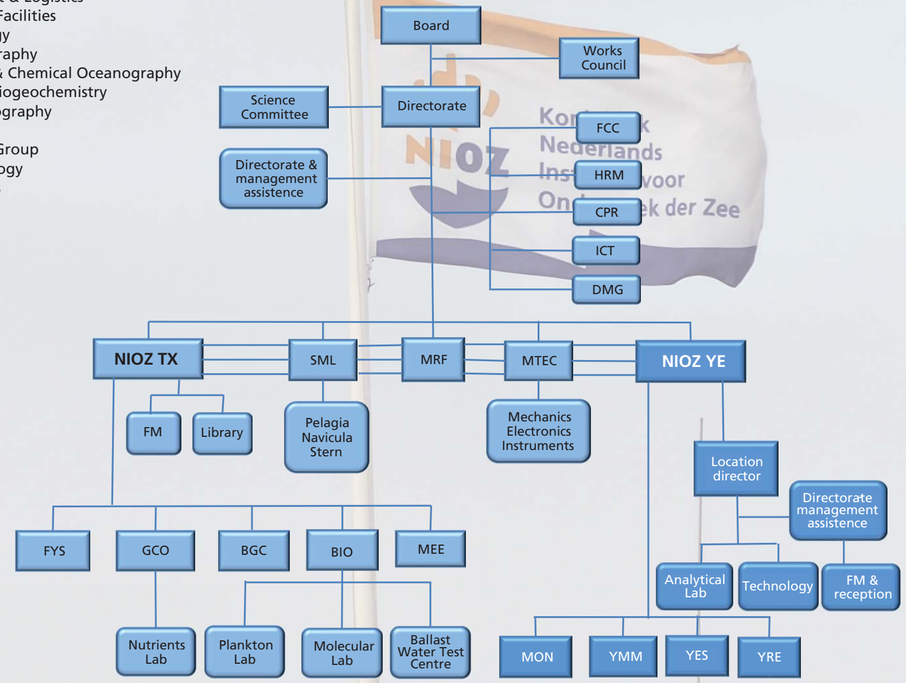
The building of CNSI at St. Eustatius.

NIOZ also successfully hosted the renowned North Sea Days on Texel, organised with its partners Deltares, WUR-IMARES Rijkswaterstaat, Maritime Campus Netherlands and the foundation Water & Media and Ecomare. At this symposium, the digital book De Staat van de Noordzee authored by prof. Peter Herman (NIOZ), Dr Olivier Beauchard and Dr Luca van Duren (Deltares), was launched. NIOZ also hosted the 9th European Workshop on the Molecular Biology of Cyanobacteria on Texel with the NIOZ Ocean auditorium fully booked!

All in all, 2014 was characterised by steep highs and deep lows. During the coming transitional year 2015, NIOZ will be evolving into a renewed, renovated and dynamic organisation, tailored to the future. We look forward in confidence, and wish NIOZ calmer seas and clearer waters in 2015.

Prof. Dr Henk Brinkhuis, general director NIOZ,
Ir Harry Baayen, chair of the NIOZ board

FCC	= Finance, Control & Contracts
HRM	= Human Resource Management
CPR	= Communication & Public Relations
ICT	= Information & Communication Technique
DMG	= Data Management Group
FM	= Facility Management
SML	= Ship Management & Logistics
MRF	= Marine Research Facilities
MTEC	= Marine Technology
FYS	= Physical Oceanography
GCO	= Marine Geology & Chemical Oceanography
BGC	= Marine Organic Biogeochemistry
BIO	= Biological Oceanography
MEE	= Marine Ecology
MON	= Monitoring Task Group
YMM	= Marine Microbiology
YES	= Ecosystem Studies
YRE	= Spatial Ecology

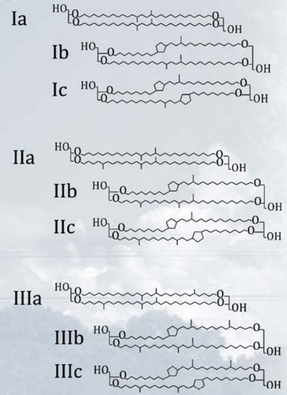


Measuring paleoenvironmental changes with microbial molecules

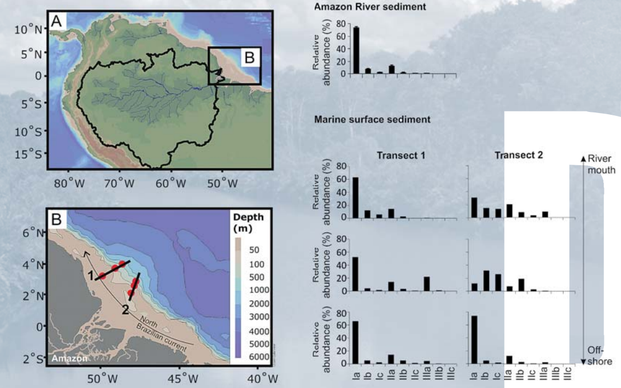
Claudia Zell, BGC

Microbial molecules in marine sediment cores are used increasingly to reconstruct the past environment. Some of these molecules are produced in high amounts in soil, thus the hypothesis was that these molecules were transported by rivers to the ocean. However, our research shows that these molecules are also produced in rivers and in the marine environment, complicating their use as tools for paleoenvironmental reconstruction.

Branched tetraethers (brGDGTs) are membrane lipids of still unknown bacteria mainly found in soil, which can adapt to changing environmental conditions. Earlier research showed that the temperature and pH of soil are the main influence on the distribution of nine different brGDGTs. These brGDGTs are eroded from soil and deposited in marine sediment. It has been hypothesized that brGDGT distribution remains unaltered during transport, and thus sediment cores close to the river mouth can be used to reconstruct river basin temperature and pH. To test this assumption, two river systems were studied, the Amazon River and the Tagus River. It was found that brGDGTs are not only derived from soils but also produced in river water and in the marine environment. Therefore, environmental reconstruction based on brGDGTs can only be done for river systems that have a strong input of soil organic matter and in marine sediment cores that are under strong influence of a river.



Molecular structure of brGDGTs



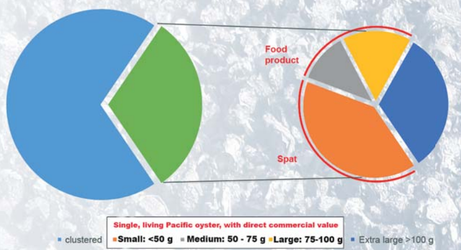
Change of brGDGT distribution from Amazon River mouth to open ocean.

DELTA

Management options for the Pacific Oyster

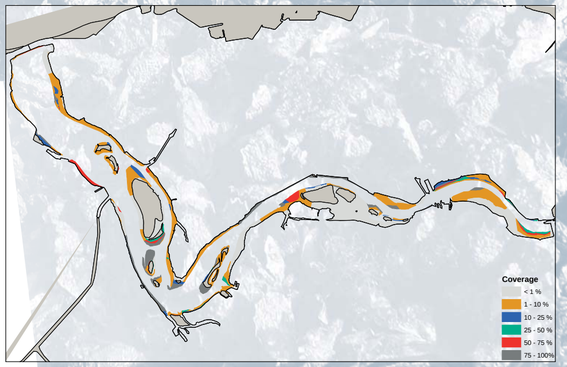
Pim van Avesaath, MON

Is the nuisance species Pacific Oyster commercially exploitable? The Monitor Taskforce participated in a consortium of public and private stakeholders as a scientific consultant to develop economic sustainable management options for the control of the feral Pacific oysters (*Crassostrea gigas*) to minimise the nuisance for water recreation.



Indication of the commercial value of living Pacific oysters depending on characteristics and size; as food or as oyster seed (spat) for grow-out in aquaculture

In Lake Veere field surveys were carried out to identify areas where oysters could cause problems for seaside visitors. This survey also revealed the first indication for the exploitation of wild oysters as commercial (food) products. Harvesting the oysters could cover the costs of the interventions and removal of this invasive alien species from the locations where it may cause problems. This observation may lead to a new kind of self-sustained management framework for Pacific oysters and other invasive species.
A feasibility study showed that, besides the surmountable technical, social and economic issues, the biggest challenge was legislative constraints regarding issuing permits for the collection of this species as a 'commercial product' (fishing activity). Irrespective of these legislative constraints, within this project, the Monitor Taskforce proved that the NIOZ, as a regional expertise centre, may act as incubator for innovative management and business approaches. This approach may lead to a new perspective within marine spatial planning at an intermediate scale, combining management of nuisance species, sustainable management of natural resources and nature conservation.



Overview of locations in the feasibility study on Pacific oyster removal in Lake Veere

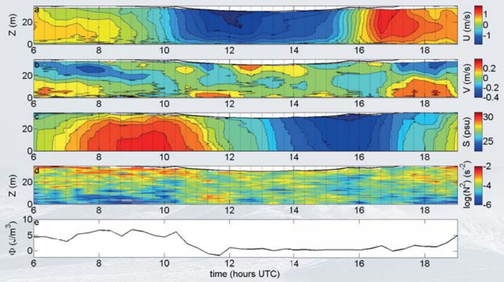
The project has been financed by RWS Z&D and VECTORS.

On the dynamics of currents in the estuarine Marsdiep basin

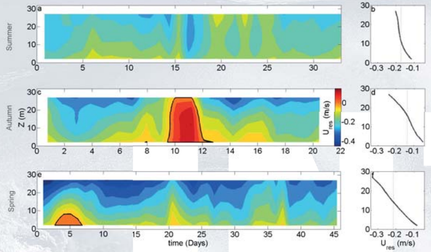
Jurre de Vries, FYS

In my PhD research, I studied the spatial and temporal variability of currents using a wide range of observations, which aimed at providing a better understanding of the small-scale hydrodynamics in the Marsdiep basin, and which can also serve as a reference case for the tidal energy plant.

Currents are an important aspect of environmental systems like the Wadden Sea because they distribute nutrients, pollutants and suspended matter, thereby partly determining the abiotic conditions and impacting the biological activity. Furthermore, tidal currents can be a potential source of energy, which will be explored in the near future by allocating a test tidal energy plant near Texel. In estuarine basins like the Marsdiep basin, the discharge of freshwater creates density gradients which modifies the shape of the vertical profiles of the instantaneous and residual currents. A wide variety of estuarine processes are able to impact the vertical profile of velocity. Our research has shown that the structure of the vertical profiles of velocity are characterized by processes which deviate from standard textbook estuaries. The complex bathymetry, the variable cross-stream circulation and the tidal distortion are some of the features that modify the estuarine hydrodynamics in the Marsdiep basin, an ideal area to study specific features and processes. Despite these atypical processes, a classical estuarine circulation is observed which is characterized by a great seasonal variability.



Results of a 13-hours anchor station during spring tide conditions. From the top down the vertical profiles of the buoyancy frequency N, the potential energy anomaly, representing the strength of the vertical stratification, that is the vertical difference in density, which is largest during late flood. Z (y-axis) indicates the height above the seabed and the time in hours in UTC on the x-axis.



Vertical structure of the residual along-stream current for three different moored deployments collected during three different seasons (Summer, Autumn, Spring). The positive values (red) around Day 11 of Autumn correspond with a major southwesterly storm.

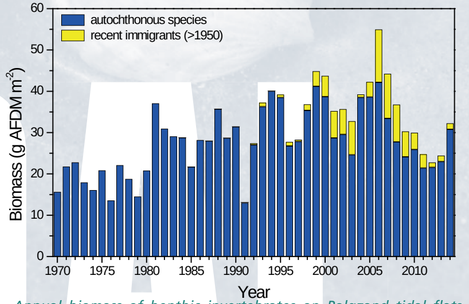
Long-term data on Wadden Sea ecology

Rob Dekker & Jan Beukema, MEE

Since the early 1970s, NIOZ runs a monitoring program for bottom invertebrates on the Balgzand tidal flats. Twice annually, at permanent sampling stations, hundreds of standardised bottom cores are sieved. The collected animals are identified, counted and weighed, yielding long-term records of numbers and biomass per m^2 in some 50 species.

Long-term data series are gaining importance by continuation. By consistently monitoring the bottom fauna, effects on the Wadden Sea ecosystem can be recorded on various continuing large-scale changes: warming climate, rising sea level, subsiding bottom, declining eutrophication. The Balgzand data series collected to date are sufficient to study trends and relationships between environmental conditions (e.g. temperature) and population characteristics (e.g. growth rates, mortality, and recruitment). Species richness increased over the years following the establishment of species originating from other continents or from southern Europe, without loss of northern species. Abundance increased particularly in winter-sensitive species. As winters became milder, higher numbers of shrimps and shore crabs occurred in spring. Accordingly, numbers of bivalve spat in summer were lower. As a consequence of higher winter temperatures, recruitment success in several bivalve species declined, leading to reduced bivalve production and biomass. It may not be coincidental that numbers of especially molluscivorous birds have declined in the Wadden Sea.

Rob Dekker and Dennis Waasdorp sampling on Balgzand



Annual biomass of benthic invertebrates on Balgzand tidal flats. Recent immigrants in yellow, including substantial shares of the worm Marenzelleria viridis and the bivalve Ensis directus, both species originating from N-America.

A turbidity maximum zone in the Dutch coastal area

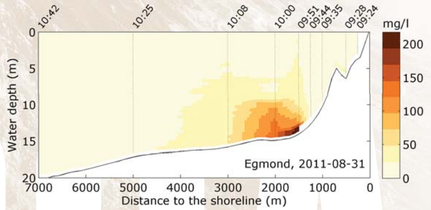
Carola van der Hout, FYS

Satellites reveal high concentrations of suspended matter close to the surface in the coastal zone, with even higher concentrations found near the seabed. New measurements have shed more light on the main transport route of suspended matter along the Dutch coast.

The North Sea is quite a turbid sea. Along the Dutch coast large volumes of suspended matter are transported, like a river of silt. This can clearly be seen from satellite images. Most of the material enters the North Sea through Dover Strait. Previous estimates of the amount of sediment that passes along the coast are very broad and do not indicate where the suspended matter may be found, and how it varies with time. This information is crucial to understand whether sand nourishments, harbor extensions or other changes to the coast affect the natural transport to ecologically important areas, such as the Wadden Sea. Within the Building with Nature program we have now found that a persistent turbidity maximum exists near the seabed at just 1.5 km from the coastline. This zone may well be the location where most of the suspended matter is transported. We performed several surveys during spring, summer and autumn at three transects perpendicular to the coast to identify the location of the turbidity maximum zone along the coast.

Water samples are filtered to determine concentrations of suspended matter. Differences in colour show concentration variations and variations in material type.

Satellite image of the Dutch coastal zone showing high suspended matter at the surface close to the coast in brown. The sediment transport direction and estimated volumes are indicated. Three black lines indicate the locations of the measurements.



The distribution of suspended matter from the coastline (right) to 7 km offshore (left) during one survey. Most concentrations are up to 25 mg/l, but there is a distinct patch (turbidity maximum zone) where concentrations >200 mg/l are found.

The beach maintained by worms?

Simeon Moons, YRE

Who doesn't like to stroll along the waterside, enjoy the warm sand or dive into the cool water? The beach must be one of our favourite places to go, and yet, we know so little about it.

In a struggle to live as close as possible to the sea without drowning, we have allowed society to domesticate the coastline. To keep the coast from eroding we feed it large amounts of sand, referred to as nourishments. Although effective, nourishments pose a frequent disturbance to the coastal ecosystem. Hence the pilot project the Sand Motor was created to investigate alternative methods of coastal maintenance. The Sand Motor is a very diverse and dynamic perturbation of the coastline, which provides many research opportunities. This prompted the idea for an interdisciplinary fieldwork campaign to study coastal processes, which was realised in 2014. For 6 weeks an international group of >20 researchers combined their efforts to measure sediment transport and its physical and biological driving forces, from depths of 18 meters all the way into the dunes. With the resulting dataset we hope to quantify the influence of macrobenthic animals, e.g. worms and shellfish, on the shape of the coast. Dunes are 'built' by grasses, and the same may apply to benthic creatures in the sea. Understanding coastal processes is key to optimising coastal management, so we can all enjoy the beach in the years to come.

Tube building worms in the intertidal zone of the Sand Motor lagoon. The physical presence of these tubes affects sediment deposition.

Measuring bed elevation in an artificial bed of tube building worms.

COASTAL

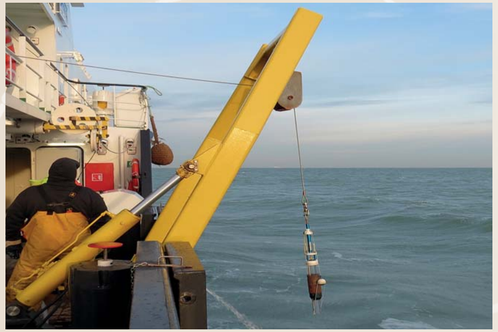
Microbial electricity from the seafloor

Filip Meysman, YES

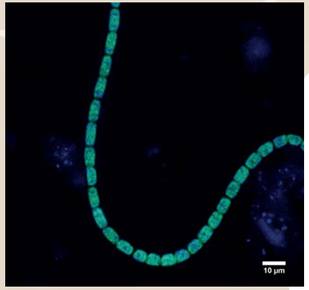
Long filamentous bacteria that create a natural living battery in the ocean floor. It seems hard to believe, but these fascinating microbes were discovered in 2014 in North Sea sediments by NIOZ researcher Filip Meysman and his team. These electrical bacteria perform a whole new form of microbial respiration, and their electron-conducting capabilities could eventually lead to entirely novel bio-electrical applications.

The newly discovered 'cable' bacteria form a true surprise from the seafloor, because they are capable of conducting electricity over centimeter distances. The bacteria are a hundred times thinner than a human hair, and consist of thousands of cells that pass electrons on to each other. In a study published in the ISME Journal, the NIOZ team shows that cable bacteria occur in many seafloor habitats, such as mangrove swamps, underneath fish farms, and even in the deep ocean. By making electricity, the cable bacteria have an advantage in the competition for energy-rich resources in the seafloor. The electricity inside cable bacteria implies a whole new way in which biological cells are cooperating, and shows how inventive biological evolution can be. The discovery also opens promising opportunities for applied research into novel bio-electrical materials and applications. Cable bacteria have evolved a biological material that is highly conductive, and maybe within some years, smartphones or photo-voltaic panels could be equipped with minuscule conducting wires of bacterial origin.

Filip Meysman explains his Royal Highness the mechanism how cable bacteria are making electricity.



Sampling for cable bacteria in North Sea sediments on board ship



Microscopic image of a cable bacterium

Grey seals found guilty of porpoise attacks

Judith van Bleijswijk & Harry Witte, BIO

Grey seals have been identified as the killers behind the mysterious deaths of harbour porpoises found with distinct mutilations on Dutch beaches over the past decade.

A NIOZ CSI-team analysed DNA from the bite wounds on three stranded harbour porpoises and found traces of three different grey seals. The study is the first successful application of forensic techniques on carcasses recovered from the marine environment.
DNA-positive wounds showed signs of bleeding, indicating that the porpoises were alive when bit. As a next step, the bite mark patterns were used to analyse pictures from autopsy reports of 1,081 porpoises that were stranded between 2003 and 2013 along the Dutch coastline. It appeared that one in five had been killed by seals, making seal attacks one of the major causes of harbour porpoise deaths in the Netherlands, alongside disease and drowning in fishing nets.
Grey seals were known as fish eaters, they can eat large fish, up to half a metre in length. Why they started eating mammals is not yet completely clear. The porpoises are targeted by the seals for their calorie-rich blubber, and healthy and fat juveniles are the favoured prey.
The study, a combined effort of NIOZ, Utrecht University and Imares, received a lot of attention in the national and international press and was published in two back to back scientific papers.

Stranded harbour porpoise with mutilations typical of grey seal attacks (photo: Cees van Hoven).

Harry Witte extracts DNA from cotton swabs of bite wounds on porpoise carcasses...

Not always as friendly as he looks here.

... and Judith van Bleijswijk extracting the data.

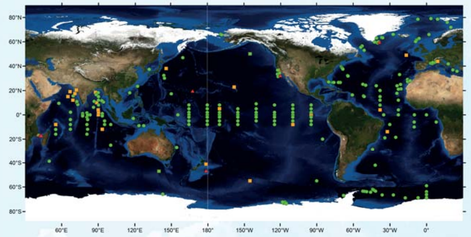
COASTAL

The Internet of ocean data

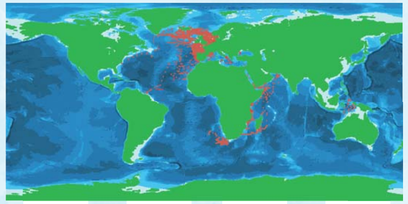
NIOZ research is global and generates large amounts of high quality and extremely valuable data. These data are made available through many online channels, thus contributing to exciting, new science and further promoting the excellent reputation of the NIOZ scientists.

Taco de Bruin, DMG

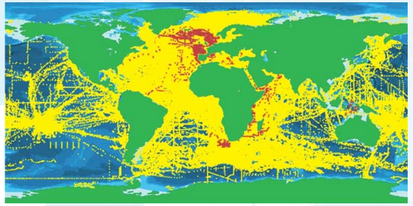
These channels include the NIOZ website, the NIOZ portals in NL-BIF/ GBIF, the portal of the Netherlands National Oceanographic Data Committee (NL-NODC) and various EMODNet portals. Two more channels merit closer attention: SeaDataNet and OceanSITES.
SeaDataNet (SDN) is a European initiative of 49 partners from 35 countries in and around Europe. The vast majority of the members are National Oceanographic Data Centres (NODC). SDN provides easy access to oceanographic data in a uniform and standardised way from one portal. NIOZ was the first institute in Europe to fully comply with the SeaDataNet standards and currently contributes over 5500 datasets of a total of over 1.5 Million.
According to its website: 'OceanSITES is a worldwide system of long-term, open-ocean reference stations'. In 2014, NIOZ contributed data on temperature, salinity, current speed and direction from its long-term moorings in the Mozambique Channel between East Africa and Madagascar (data processed for 2004-2009) and in the Irminger Sea between Greenland and Iceland (data processed for 2003-2012).



Map of all mooring and observatory locations in the OceanSITES Network (from http://www.oceansites.org). The NIOZ moorings are in the Mozambique Channel and East of Greenland.



NIOZ data available through SeaDataNet, clearly showing the world-wide coverage of NIOZ research



NIOZ data (red) super-imposed on all data (yellow) from 35 European countries, available at http://www.seadatanet.org

Mercury rising

Micha Rijkenberg, GCO

Concentration of the toxic metal mercury in the upper ocean has tripled since the beginning of the Industrial Revolution. This is the outcome of a worldwide survey of metal concentrations in the ocean.

Mercury occurs as inorganic mercury or as methylmercury. Especially methylmercury accumulates in aquatic organisms reaching concentrations that can become toxic for organisms and their consumers.
Mercury enters the oceans naturally as a result of the breakdown, or 'weathering,' of rocks on land. Human activities like mining and coal burning pollute the oceans further with mercury. Until now, only models could tell us which part of the oceanic mercury content resulted from human activity. NIOZ scientists cooperated with scientists from Woods Hole Oceanographic Institution, Wright State University, and Observatoire Midi-Pyrénées in France investigating mercury concentrations in seawater samples collected during multiple research cruises across the world. Using these measurements we estimated the mercury in the ocean that originated from natural sources and the amount of mercury that entered the oceans due to human activities. We found that mercury in the upper ocean increased three times and that the ocean as a whole showed an increase in mercury of roughly 10% since the beginning of the Industrial Revolution.

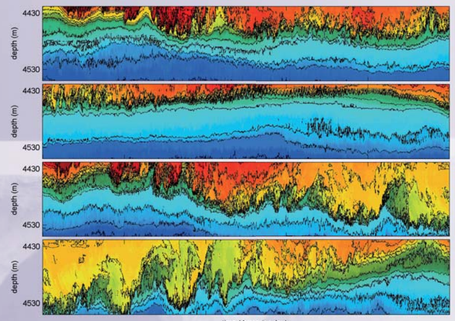
The titanium frame with 24 NIOZ developed 'pristine' ultra-clean water samplers is ready to be launched.

Extremely long Kelvin-Helmholtz billow trains in the Romanche Fracture Zone

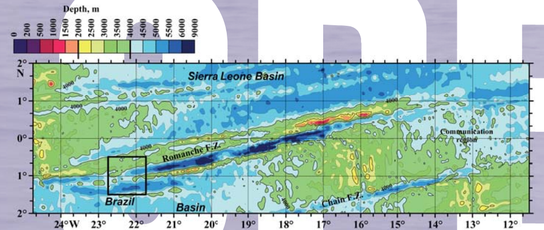
Hans van Haren, FYS

At the sill-slope in the deep Romanche Fracture Zone of the Mid-Atlantic Ridge, the rapidly flowing 'Antarctic Bottom Water' causes strong turbulent mixing with the overlying water masses. This is demonstrated and quantified in detail using moored high-resolution temperature sensors.

In the Atlantic Ocean, the densest water mass 'Antarctic Bottom Water' (AABW) can only cross the Mid-Atlantic Ridge from its southwestern to northeastern basins in deep conduits. At the southwestern entrance of one of these conduits, the equatorial 'Romanche Fracture Zone' (RFZ), AABW crosses a sill at a depth of 4550 m in a 7 km narrow channel before plunging into the deep. During the Russian-Netherlands collaboration project a 200 m long cable with 99 NIOZ temperature sensors was moored between October 2013 and April 2014.
A one day example from half-year long moored observations at the southwest entrance of the RFZ using NIOZ temperature sensors. It demonstrates the turbulence details of mainly current shear-induced mixing between cold, deep AABW and relatively warmer overlying Atlantic waters. The AABW-inflow into the RFZ and the tide constitute a means for an extremely long train of >250 consecutive Kelvin-Helmholtz billows (turbulent overturns) that vary between 5 and 100 m in vertical scale.



One day example from half-year long moored temperature observations. The colour range [dark-blue, dark-red] represents the temperature range [0.5, 1.2]°C. This figure together with the background picture formed the cover-image of the 2014 (V41, 23) Geophysical Research Letters issue.



Working area within the black rectangle around the southwestern entrance of the Romanche Fracture Zone.

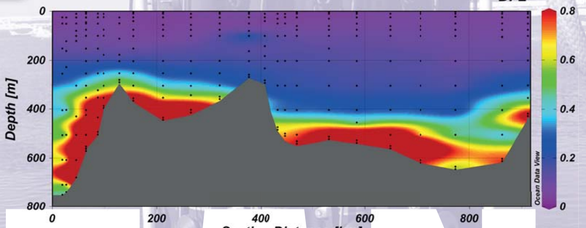
Where do phytoplankton shop for iron in the Ross Sea?

Loes Gerringa, GCO

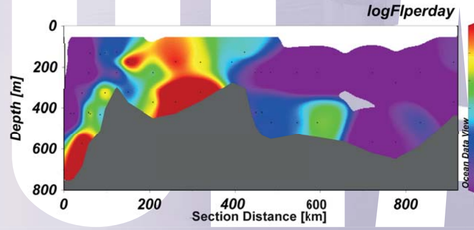
Dissolved iron, an essential nutrient for marine phytoplankton growth, is extremely scarce in Antarctic surface waters. A study in the Ross Sea revealed an unexpected source of iron, sustaining local phytoplankton production. In turn, the phytoplankton is at the base of the Antarctic food chain.

On board the American ice breaker N.B. Palmer we studied sources of iron in the Ross Sea and iron transport to the photoactive upper 50m of the ocean. This 'Phantastic' project, carried out in collaboration with researchers from Stanford University, was funded by the US-NSF.
Dissolved iron concentrations are extremely low in the upper 50 m of the Ross Sea. We discovered, however, that concentrations near the bottom were more than 20 times higher, and highest in layers containing fine-grained suspended sediment particles. We concluded that these layers must be the main sources of iron. This is surprising because it was generally accepted that these layers adsorbed iron, thus removing it from the water column. We found that dissolved iron transport from near the bottom to the surface is favoured by water turbulence generated over shallow submarine banks.

Loes Gerringa in front of the Nathaniel B Palmer in the Ross Sea



Dissolved iron, DFe in nmol per liter, in the Ross Sea. The dissolved iron is very low in the upper 50m, and relatively high near the bottom.



Transport of dissolved iron (mol m^{-2} day^{-1}) to the upper mixed layer (50 m). The upward transport is expressed as logarithmic values, ranging from -8 (=10^{-8}) to -6.8 (=$10^{-6.8}$). Transport is highest near banks.

OPEN OCEAN

Molecular analysis of bacterial diversity of an acidified tropical Bornean estuary

Henk Bolhuis, YMM

The tropical Brunei estuary system is characterized by a spectacular double gradient between acidic (pH 5) fresh water from the Brunei River to the basic (pH 8) marine Brunei Bay. We studied the effect of these factors on microbial mat communities along this gradient.

In a unique collaboration with the University Brunei Darussalam and the Utrecht University, we performed one of the first microbial studies in Brunei, a wonderful tropical country in north east Borneo. The acidity of the river is caused by drainage of acid rain forest soils during the rainy season. This low acidity had a clear effect on the morphology of some of the local shellfish of which the shell was more eroded upriver than downstream in the neutral bay. As microbiologists we are interested in how these strong gradients affect the microbial community composition and function. In a pilot study we sampled several microbial mats along the Brunei River into the marine part of the bay. Molecular analysis revealed that the composition was mainly affected by the salinity gradient and that most of the identified bacteria are novel and have no cultivated close relatives.

Bolhuis H, Schluepmann H, Kristalijn J, Sulaiman Z, Marshall DJ (2014) Molecular analysis of bacterial diversity in mudflats along the salinity gradient of an acidified tropical Bornean estuary (South East Asia). Aquatic Biosystems 10: 10.

Sampling at the mudflats of the Brunei River at low tide.

Mangrove intertidal system at the island Pulau Pepatan

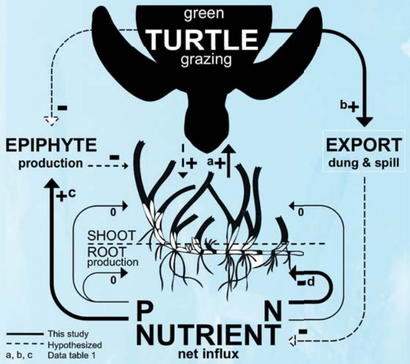
Sea grass habitat collapse due to turtle overgrazing

Marjolijn Christianen, MEE

With field experiments and mathematical models, the effects of turtle grazing and wave actions on sea grass meadows near East Kalimantan were evaluated. Results indicate that a tipping point is almost reached

Green turtles Chelonia mydas and sea grass meadows heavily depend on one another. Sea grasses act as ecological engineers that manipulate their own environment as they alter the water flow, nutrient cycle and food web structure. Green turtles graze on the sea grass meadows, which also stimulates the growth of the plants. The study site, a sea grass meadow near East Kalimantan in Indonesia, is a marine protected area with a particularly high density of green turtles of about 20 animals ha-1. This is so large that the turtles have adopted a new grazing strategy which is actually damaging the meadows. These have now started to erode and our computer model predicts that they are close to a collapse. As a solution we have proposed to enlarge the marine protected area.

Source: Christianen M.J.A. (2013) Seagrass systems under nutrient loads, hydrodynamics & green turtle grazing – Do green turtles rule the seagrass world? PhD thesis, Radboud University Nijmegen.



Conceptual model of seagrass functioning under turtle grazing and high nutrient loads. Leaf grazing by green turtles increases seagrass production (arrow a) and export of daily primary production (arrow b). When nutrients are added, rhizome biomass decreases (arrow d), resulting in a destabilization of the sediment. Plus, minus and zero signs indicate positive, negative, and absent effects of one flux or turnover rate on another.

Green turtle Chelonia mydas

TROPICS

Bivalve larvae in the picture

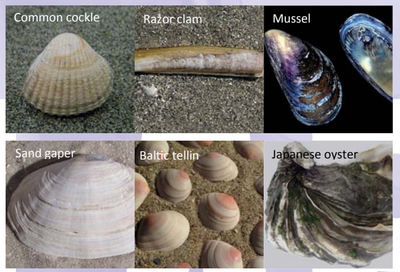
Anneke Bol, MEE & Judith van Bleijswijk, BIO

Bivalves reproduce via larvae that float in the water column. These larvae cannot be identified to the species level with a microscope. Therefore, diagnostic DNA tests for six common bivalve species were developed in the laboratory.

Six bivalve species dominate the Wadden Sea: the common cockle, the razor clam, the mussel, the sand gaper, the Baltic tellin, and the Japanese oyster. To understand the wax and wane of these species, knowledge on the dispersal patterns of their offspring is important, both in time (seasonal variation in spawning) and in space (vertical distribution of larvae). In the NIOZ molecular biology laboratory, the presence of bivalve larvae is detected on an agarose gel after species specific multiplication of DNA. Samples that contain larvae show a DNA band whereas samples without larvae remain blank. Results of a year round screening of samples from the Wadden Sea show interesting seasonal patterns that differ per bivalve species. Typically, larvae of the Baltic tellin are found early in the year only, whereas larvae of Japanese oyster appear in late summer, and larvae of the razor clam are present almost year round. The results are used for ecological models by Dr. Katja Philippart.

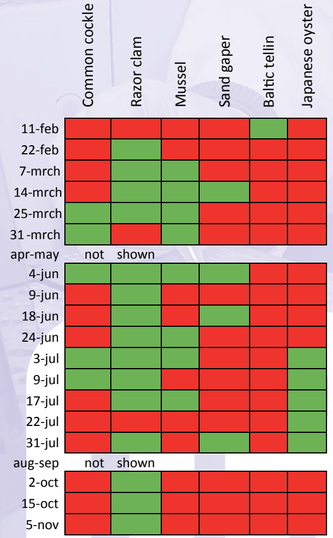
Publication: J. Plankton Res. (November/December 2014) 36(6): 1512-1527. doi: 10.1093/plankt/fbu073

Anneke Bol



Dominant bivalves in the Wadden Sea

Agarose gel with DNA ladder (L) and samples s1-s10. Bands (1) indicate that larvae were present, blanks (0) indicate larvae were absent



Year round presence (green) and absence (red) of larvae of six bivalve species in the Marsdiep tidal inlet sampled during high tide.

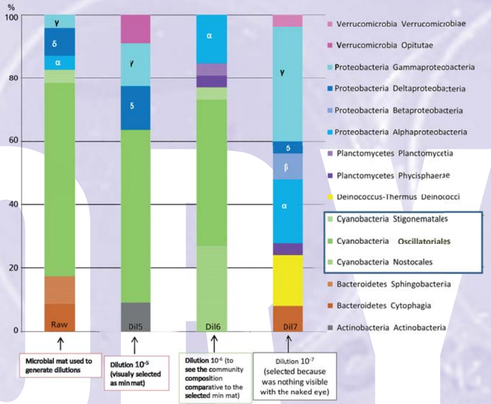
Marine Microorganisms: Cultivation Methods for Biotechnological Applications

Lucas Stal, YMM

Marine microorganisms form an almost untapped resource of biotechnological potential. However, its use is hindered by the low success rate of isolation of novel microorganisms and often by poor growth efficiency. Hence, the vast majority of marine microorganisms has not been cultivated and is often considered as 'uncultur-able'.

MaCuMBA (www.macumbaproject.eu) aims at improving the isolation rate and growth efficiency of marine microorganisms from conventional and extreme habitats, by applying innovative methods, and the use of automated high throughput procedures. The approaches include the co-cultivation of interdependent microorganisms, as well as gradient cultures and other methods mimicking the natural environment, and the exploitation of cell-to-cell communication. MaCuMBA grows thousands of cultures simultaneously using gel microdroplet technology. Single-cell isolation methods facilitate the isolation of specific target cells. The department of Marine Microbiology studies microbial mats as a model ecosystem. The microorganisms are characterized and deposited in the Culture Collection Yerseke (CCY) (www.ccy.nioz.nl). MaCuMBA (Brazilian-Portuguese word) stands for witchcraft and black magic, as still much of the cultivation of marine microorganism is to us.

Two different ways to cultivate microorganisms.



Microbial mats are complex and highly diverse microbial ecosystems formed by cyanobacteria (green) The 1st bar shows the community composition. Stepwise dilution (to extinction) is a method to produce a more simple microbial community. In the 4th bar, cyanobacteria were extinct (no green) and no mat was formed. The 2nd bar shows the community composition of what we call a minimal microbial mat and the 3rd bar shows the microbial community 10x less diluted than the minimal mat.

MARINE RESEARCH FACILITIES

Erica Koning, MRF

For the NIOZ flagship RV Pelagia 2014 was a year filled with highlights. The most remarkable event took place on April 15, when King Willem Alexander visited the ship and enjoyed lunch on board.

The 2014 cruise program was a succession of barter (exchanges with our European OFEG research partners) and semi-commercial charter cruises, and 2 cruises for national science programs. The program started in Ponta Delgada, Azores, with the first barter for the US National Science Foundation, followed by a charter in the North Sea and Baltic Sea for the German Hydrological Survey. After an 8-day 3D-seismic charter for Deltares in mid-April, Pelagia returned to Ponta Delgada for 'Treasure', carried out in the framework of the 'Topsectoren' on the effects of deep sea mining. In June Pelagia was moored in front of the Scheepvaartmuseum in Amsterdam for a 9 day public event. Approximately 3000 people visited the ship.
In July, a 28-day barter cruise in the Norwegian Sea for NERC produced a record 0.5 km of piston core and 1200km of seafloor mapping. At the end of September, after the biogeochemical HCC cruise that ended in Barbados, Pelagia made her way to Mauritius for a 75-day charter for the German Bundesdienst für Geowisseschaften und Rohstoffe (BGR). During this cruise, as yet unknown, black smokers were discovered along the Southwest Indian Ridge. The area was subsequently named 'Pelagia field'.

RV Pelagia moored next to the 'scheepsvaartmuseum' in the centre of Amsterdam. The schip was open to all visitors of the museum in June.

King Willem Alexander visits RV Pelagia in the harbour of Oudeschild, Texel on 15th April.

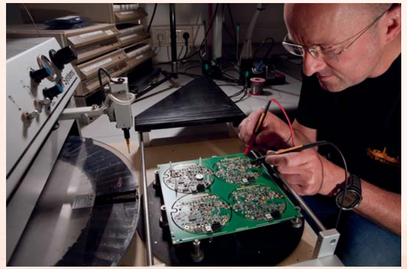
Recovering a TRAFFIC buoy that has collected Saharan dust for the past year.

SUPPORT

MARINE TECHNOLOGY

Walther Lenting, MTE

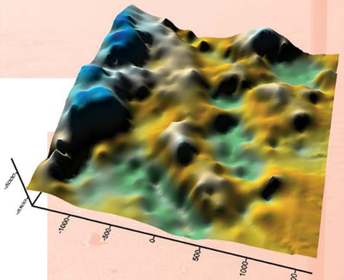
The Marine Technology Department offers technical solutions to answer scientific questions. For this purpose, we design, build and maintain scientific equipment. Here, we highlight two of them.



Development of a new data logger to meet future needs.

The HD Stereo Photo Cam is ready to map a coral reef on one of the Dutch Caribbean Islands.

The upper part of the sediment meter.



3D architectural complexity image in a 3 by 3 m quadrat of the coral reef bottom. Maximum elevation is approximately 40 cm .

Measuring the height of intertidal flats
Can intertidal flats keep up with the rise in sea level? If not, then they will slowly drown, which will have enormous consequences for intertidal ecosystems. This was the starting point for our electronics division (MTE) to develop a sensor for Prof Tjeerd Bouma. The sensor can simply be stuck into the sand and uses a vertical array of 200 light sensors to monitor the height of the sediment surface. It autonomously logs the data, which can be retrieved via WiFi.

HD stereo photo cam for coral reef mapping
NIOZ scientist Fleur van Duyl and IMARES scientist Erik Meesters needed a system to map the 3-dimensional structure of the coral reefs of Dutch Caribbean islands. MTE developed a system in which two HiRes photo cameras are coupled with forward and downward looking video cameras. Two parallel laser beams are used for targeting and visual sizing of the reef community. The system can be used either by a diver, or from a vessel using an umbilical.


NIOZ
Royal Netherlands
Institute for
Sea Research, Texel
000050 9
22G1
NIOZ
TEXEL
NIOZ
22G1

NIOZ investigates potential impact of deep-sea mining near the Azores

Yvo Witte, MTM & Henko de Stigter, GCO

The ocean floor is locally rich in precious metals. Harvesting these submarine treasures is a challenging task, however, because of the extreme water depths involved. Also, it hasn't been settled which countries are entitled to exploit these deposits. Yet, in view of the increasing scarcity on land of certain high-tech metals, it seems merely a matter of time before deep-sea mining will be a booming industry. But how will the deep-sea environment cope with industrial extraction of metal deposits? And in what state will the seabed be left to future generations?

To answer these important questions, NIOZ scientists along with partners from Delft University of Technology, IMARES, TNO and Dutch shipbuilding and dredging companies have initiated the 'Treasure' project, short for 'Toward Responsible Extraction of Submarine Mineral Resources'. The project is funded by NWO and Dutch industry partners. Methods for assessing the environmental impact of deep-sea mining are being tested in practice in an area southwest of the Azores where metal-rich mineral deposits occur around deep-sea hot springs located more than 2 km below the sea surface. 'With the growing demand on raw materials it will sooner or later become economically profitable to exploit these deposits' says Henko de Stigter, researcher at NIOZ's Marine Geology and Chemical Oceanography department. 'The mineral deposits are rich in copper, lead and zinc, but also contain some rare metals which are indispensable for the production of laptops, mobile phones, electric cars and wind turbines. The western industrial nations are keen to exploit these resources in order to become less dependent on export from China.' De Stigter: 'We know still very little about the deep-sea life of the area, and even less about how it will be impacted by mining. We can only hope that the ecosystem will recover after mining, but will it really do? And if so, how long will it take? Our challenge is to investigate this all.'

In order to assess the original state of the deep-sea environment in the area, bottom landers equipped with various sensors and cameras have been deployed in the area, during an expedition with research vessel Pelagia in 2014. The landers, designed and built by NIOZ's Marine Technology department, will be recovered during a subsequent expedition in spring 2015. 'Exciting moments, whether or not our equipment will return in good state to the surface', comments technician Yvo Witte. 'At those depths, the instruments are exposed to extreme conditions.'

He and his colleagues are well prepared for their job. 'We participate in the yearly Inmartech conferences, where marine engineers from all over the world meet to exchange ideas. Deep-sea research is technically challenging, requiring innovative solutions. The need to improvise and find out by ourselves is what makes our job really exciting.'

NIOZ technicians develop a weighing robot for samples from the intertidal flats

Johan van Heerwaarden, MTI, Sander Holthuijsen, MEE & Roel Bakker, MTI

'That must be possible in a more convenient, more accurate and much faster manner' stated Sander Holthuijsen after he and his Marine Ecology colleagues finished yet another year in which they took between 50,000 and 70,000 weighing cups from a tray and put it on the scales by hand.

Instrument maker Johan van Heerwaarden remembers the first visit of Sander Holthuijsen still very well. 'Can't you make something?' Sander asked us. 'Of course we can; that is what we do all the time' he answered dryly. The result is operational for a year now. Together with his colleague Roel Bakker, van Heerwaarden designed and built a weighing robot. The robot plays a main role in the SIBES project, for which almost 5000 samples from the soft sea bottom are taken over the entire intertidal area of the Dutch Wadden Sea between the 'Balgzand' and the isle of Borkum. The samples have a diameter of 15 cm and consist for a large part of sand, mud and other dead material. 'But they also contain worms and shellfish, which are both important food sources for sea birds and fish. Therefore we sieve out all organisms larger than 1 mm, name and count them and put each species in a weighing cup and register the samples. Weighing is repeated two more times for each cup' says Sander Holthuijsen. 'The second time after the sample has been dried at 60˚C to determine the dry-weight, and a third time after the sample has been burnt to ash at 560 ˚C to determine the ash-weight. What we want to know is the biomass, the difference between the dry-weight and the ash-weight. This tells us how much a bird must eat to be able to survive'.

Weighing by hand is very labour intensive. 'For one person it would be a full-time job for a whole year. The robot designed by van Heerwaarden and Bakker saves us a lot of work. You can put 96 cups on a plate and four plates in a rack. In less than an hour they are all weighed. Each weighing cup has its own unique code, which is detected in a light sluice. A computer programme developed by our colleague Frans Eijgenraam recognizes them. In this way, the computer knows for example that cup 15 in rack 20 contains one lugworm and it also knows where this lugworm was found in the Wadden Sea. This method is so successful that in the mean-time other groups are also using our weighing robot.'

'But we aren't ready yet' tells Bakker. 'Changing the plates is still done manually, but we are planning to automate this step too. Then we could weigh 5300 cups in one day. In this way we are improving the system continuously. We are the only team in the world who can do this type of research on such a large scale.'

The customer can trust our data

Olaf van Hoesel & Pim van Avesaath, YMT

Customers must be certain that the data they get are accurate and do not depend on the bias of the researcher. For this reason the NIOZ Monitor Taskforce has developed a quality management system and submitted it for accreditation according to the NEN-EN-ISO-IEC-ISO 17025-standard.

The Monitor Taskforce (MON) in Yerseke is a semi-commercial department, which conducts applied marine science. Clients like 'Rijkswaterstaat', the Port of Rotterdam, and government agencies are often obliged by law to compose environmental impact assessments describing the ecological situation of, for example, a harbour or an estuary for which they are responsible.' 'We investigate life in the sandy bottom. Which animals are living there? In what numbers? How does this compare to earlier measurements? These are the most important questions we try to answer. Based on this we make ecological analyses' tells Pim van Avesaath, Quality Manager of MON.

In 2008, Olaf van Hoesel developed an ISO 9001 certified quality management system which described all processes and steps between sampling and the final publication of the data in a report. 'Reacting on questions from the market, after some slight hesitation, we took this system one step further with respect to the analyses of the samples. The most important reasons to do this were the stiff competition and the economic crisis, which lead to a clear decrease in demand of our skills.' The new system according to ISO 17025 is better related to the scientific needs and shows that we have the knowledge to deliver what we promise. It obliges us to use the same set of methods in the vast majority of cases and when we choose to use an alternative method, this should be underpinned with a sound argumentation.'

This way of working asks quite a lot from the people involved. 'Besides the analyses, quite a lot of work is added for proper reporting and quality control' tells van Avesaath. 'MON has 10 employees of which about half are involved in research while the other half carries out support work. We train people. They have to pass a test before they are allowed to determine the animal fauna of the sea floor by themselves. This implies that we must stimulate all the people involved to work within a framework, also when this is more time-consuming.' Van Avesaath experiences it can be difficult to enforce this. 'Sometimes I am a colleague yet on other occasions I can be an annoying 'boss' who checks whether everybody is working according to required high quality standards.'

'But finally we all benefit from a good result' he thinks. 'The customer can rely on the data. Besides this, we also assemble a dataset covering samples taken over a period of many years. Because they have been analysed with exactly the same methods, they are directly comparable. There has also been keen interest of other NIOZ departments for the experience we gained on the way towards accreditation. The chemistry lab in Yerseke and the ballast water test & research centre on Texel also want to set-up a similar quality management system. As pioneers we can share our experience and knowledge with them. They could benefit a lot from that; accreditation is not simply a cheap swimming certificate.'

A unique collection of photo-synthetic micro-organisms

Henk Bolhuis, Lucas Stal & Michele Grego, YMM

Cyanobacteria and algae are fundamental life forms. Their contribution to the global biomass is enormous, and therefore receive worldwide scientific interest. Scientists expect that they can play a role in various technological applications. The Culture Collection Yerseke (CCY) is a unique collection of 500 microbial species maintained by the department of Marine Microbiology of NIOZ in Yerseke, led by Lucas Stal, and receives increasing attention worldwide.

Three billion years ago, cyanobacteria were the first to produce massive amounts of oxygen using light, water and carbon dioxide (a process called photosynthesis). The presence of oxygen was crucial for the development of higher life forms. Recently, scientists discovered other interesting functions of cyanobacteria and algae. They can regenerate polluted soil or water, produce antibiotics, and produce sustainable energy in the form of biofuel.

NIOZ maintains a unique culture collection of these photosynthetic micro-organisms. This is a golden egg according to scientist Henk Bolhuis. 'Because we maintain this collection we are granted large projects. We are a popular partner for other institutes because we have something unique, something they do not have.'

Every micro-organism has its own specific growth characteristics. One is restricted to fresh water, the other requires sea water, whereas a third only thrives in pools of 40 degrees Celsius. Also the rhythm of day and night is a crucial factor for cyanobacteria. 'Tropical species require 12 hours darkness and 12 hours light', explains curator Michele Grego.

This all makes maintaining a large culture collection a specialist's job, requiring special knowledge and attention. 'Michele is really dedicated. It is more than a job for him. He never takes off more than two weeks', says Bolhuis in admiration.

To prevent fungi and other contaminants infecting the vulnerable culture collection, Grego has a special lab with air filters to maintain sterility. This was quite an investment. Money is also needed to extent the collection. Bolhuis stresses that it is important to not become dependent on companies. 'Financial input from commercial companies is welcome but can also complicate our job. They want to keep new discoveries for themselves, whereas we serve the public community. Accessibility of the collection to everybody is important. That's science.'

For more information: www.ccy.nioz.nl.

Ups-and-downs of migrating birds

Theunis Piersma, MEE

Why is it that spoonbills were threatened to extinction thirty years ago, whereas currently they arrive with thousands in the Wadden Sea to raise their chicks? Such questions are tackled by Theunis Piersma and co-workers.

To support his work, Piersma was honoured in the presence of HRH Willem-Alexander with a Spinoza-prize, worth of 2.5 million euro. A big success for his research group, housed at NIOZ in the so called 'birdwing'. 'Twenty-eight years ago we started with two people in a small room', Theunis says. Good research has led to a steady growth of the number of participating scientists. 'We now count twenty people who are very productive scientifically, with publications in high impact journals. Moreover, we contribute knowledge that is valued by nature conservation organisations such as Staatsbosbeheer and Natuurmonumenten. And this, in turn, helps to obtain new money for new science. We are an international group, composed of scientists from Russia, Canada, Mauritania, China, Ghana, Australia, Spain and Argentina. Sometimes visiting scientists bring their own money.'

Piersma and co-workers are focussing on migrating birds like red knots, bar-tailed godwits, sanderlings and spoonbills. In the past, questions about food (what and how much) were already tackled, but currently scientists go further and also study the interactions between population size and changes in food availability. 'In the 1960s, in Europe only 200 breeding spoonbill couples survived. Currently, we are back at 3000 breeding pairs in the Netherlands alone. The increase is levelling off, however, despite the fact that 150 years ago 30,000 breeding couples bred in the Netherlands. The fact that numbers fail to reach these past high values is probably best explained by the Wadden Sea and inland waters now containing less food for birds. Spoonbills, and other birds in the Wadden Sea, are limited by food availability.'

To better understand migrating birds, they are tagged with colour rings. 'Subsequently we try to spot them with binoculars as often as possible.' A small number of birds are labelled with GPS trackers that register the exact locations of the bird. 'Let's say a spoonbill is born on Texel, and returns the next year to the exact spot. What has it been doing in the intermediate time? How did it learn which route to take? We do not know anything of the way that birds learn their ways of life. By tagging young birds and their parents we soon hope to discover how spoonbills discover how to migrate and how they respond to changes in their environment.'

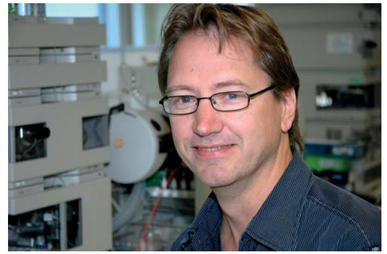
Chemical fossils help to predict climate warming

Jaap Sinninghe Damsté, BGC

The idea that climate change results in global warming seems widely accepted nowadays. But how much temperatures will rise appears hard to predict. On average rises between two and six degrees is the rather broad range given by current prognoses. More precise predictions may be obtained, however, by making use of chemical fossils of tens of millions of years old, preserved at great depth within seabed sediments.

That is the basis of the innovative research conducted at NIOZ's Marine Biogeochemistry and Toxicology department, led by Jaap Sinninghe Damsté, who was awarded in 2014 with the Dr. A.H. Heinekenprijs for Environmental Sciences.
For reconstructing the history of the Earth, geologists commonly make use of plant and animal remains preserved as fossils in rocks. Sinninghe Damsté extended this methodology to include also organic substances remaining from unicellular organisms from past geological times. 'Archaea play a major role in our research. In these micro-organisms, the chemical structure of the cell membrane is variable according to the ambient temperature. With higher temperature, more cyclic carbon structures are formed. By detailed chemical analysis of seabed samples, the temperature in past geological times may thus be reconstructed', explains the researcher.

Sinninghe Damsté and his co-workers are particularly interested in the relationship between CO_2 (carbon dioxide) concentration in the atmosphere and global temperature. 'Currently this concentration is rapidly increasing. Over the past million years the concentration fluctuated between 180 and 280 parts per million, but in recent years it rose to over 400. And according to predictions the combustion of fossil fuels will lead to a further increase to over 1000 ppm by the end of this century.'
Such high concentration is comparable to that of the middle Cretaceous, 90 million years ago. The ocean surface water was about 7 degrees warmer than at present and deeper water masses were almost completely depleted of oxygen. 'Under those conditions the CO_2 fixed by algae was less rapidly returned to the atmosphere but instead it was buried in seabed sediments. During periods of oxygen depletion the fast removal may lead to a drastic reduction in atmospheric CO_2. We were able to confirm this by analysing the chemical fossils of plants. In a mere hundred thousand years the atmospheric CO_2-content halved and ocean temperature decreased by about 5˚C. On geological timescale this is exceptionally fast.'



These interesting conclusions have resulted from the particular collaboration of various disciplines. 'On average 35 people work in our department, with background in geology, biology and chemistry. About 70 percent of the research is directed at the ocean. With almost 75 publications over the last year, we have been quite productive.'
Even so, a better understanding of the oceans is urgently needed. 'Not just for scientific interest, but also from a societal point of view, it is vital to know how global temperature will evolve in the future', comments Sinninghe Damsté. 'Fortunately we have been able to acquire funding for two major projects during the past one and a half years. Budget cuts are reason for considerable concern for scientific research nowadays, but despite that our department is coping reasonably well.'

Pioneer explores potential of Seaweed

Klaas Timmermans, BIO

‘Seaweed farming can be a world wide solution to food and energy shortage and environmental pollution.’ We are quoting Professor Timmermans, project leader of the NIOZ Seaweed centre that was opened last year by HRH Willem Alexander.

‘Seaweed farming is hot’ says Timmermans. Whereas many scientists are experiencing difficulties with funding, seaweed pioneers can increasingly count on investments from both companies and organisations. ‘Seaweed is intriguing. One can easily watch and grab it, and scientifically it is very interesting’ according to Timmermans as he tries to explain his success.

He immediately adds that his research is still in its infancy. ‘There are many things we still don’t know.’ Growth characteristics of seaweed are pretty much well known but losses caused by predation or viral lyses are yet not quantified adequately. The same counts for effects on the ecology. ‘By building seaweed farms at sea, environmental conditions are affected e.g. light and nutrient conditions change and refuges are created for a variety of animals that can hide and reproduce in the weeds.’

Although not yet fully explored, it seems that seaweed farming has great potential. Seaweed is stocked with carbohydrates and protein and can be a good food source for humans and cattle. It also has potential as biofuel. Moreover, it can purify the water from excess nutrients. ‘Rivers discharge high amounts of nitrate and phosphate into the seas, which often have negative effects on the ecosystem. When seaweed farms are positioned in the discharge area, seaweeds take up the nutrients, preventing negative effects.’

Ten kilometres west of Texel the Stichting Noordzee Boerderij started a first pilot with NIOZ as independent controller. ‘The pilot farm is still limited in size. The ambition is to harvest the first few kilos soon.

When we succeed, we will tackle new questions, e.g. how do we extract sugars from the weed most efficiently, and how can we influence the sugar content. We are only at the beginning of this trajectory.’

The group of seaweed pioneers is still small. ‘But our Seaweed Centre is growing rapidly. Last month we were granted a large project. In cooperation with Hogeschool Larenstein we are going to explore how protein from seaweed can be processed as fish-food. Currently fish-food is processed from fishmeal and soya, but this has disadvantages. It is all very exciting and interesting. As a scientist I am happy to take part in this development.’

Tammo Bult, IMARES

Henk Brinkhuis, NIOZ

Jan Hoegee, TNO

Frank Hoozemans, Deltares

Maritime Consortium Of Environmental Science and Technology MUST

The MUST consortium took off with a symposium in the Maritime Museum Amsterdam on 20 June, organised by partners IMARES, TNO and NIOZ. Recently, Deltares also joined as the fourth renowned Dutch marine research institute. Here, the four directors express their vision on the future of MUST.

IMARES/Tammo Bult
The MUST consortium makes a difference. By combining the strengths of our organisations we aim to improve our understanding of the ocean and from this, our ability to manage ocean resources sustainably. One of the topics I personally hope to develop within MUST is the subject of deep-sea or off-shore mining, a new development, requiring a pro-active approach of government, industry and knowledge partners. It is a subject the Dutch Maritime industry could excel in, by developing the technology and knowledge towards a careful, responsible and respected industry.

NIOZ/Henk Brinkhuis:
The four MUST partners clearly have complementary strengths and together we can investigate a large range of topics from purely (high-)technical to ecological and from fundamental to highly applied marine science. NIOZ will be instrumental in providing the required fundamental scientific component along the way to the eventual frontier applications. In that way we can strengthen the name of the Netherlands as a High Tech maritime nation and we can be highly competitive in the global community. Besides sustainable and responsible usage of the oceans, ‘Blue sustainable growth’ is the topic I would like to tackle first with MUST and that in a wider sense, involving Blue energy as well as sustainable food production from the sea.

TNO/Jan Hoegee
The MUST consortium will create and catalyze sustainable global ocean innovation technologies based on ecology, biology and technology fertilization. The Netherlands is, by tradition, a maritime country. Its prosperity is largely based on its position at the shores of the North Sea. The consortium will contribute to a sustainable ‘Blue Growth’, together with Dutch knowledge partners and the maritime & offshore industry. Also they will contribute to positioning the Netherlands towards a top innovative, durable maritime position in the world. TNO’s contribution will be focused primarily at an efficient and safe seafloor and deep-sea mining and sustainable new fish(farm)ing techniques.

Deltares/Frank Hoozemans
Deltares was invited to join MUST at the end of 2014 in order to complete the playing field in marine science and system-knowledge. With a strong position in our backyard covering tidal inlets, the dynamic North Sea and estuaries, the challenge will be to join forces within MUST to support (international) communities and stakeholders. With deep sea mining identified as an interesting prospect, the recently held workshop ‘Nature meets design’ is a (first) promising step.

The 9th EWMBC was the largest symposium ever at NIOZ-Texel

9th EWMBC

The 9th European Workshop on the Molecular Biology of Cyanobacteria was organised by Prof. Lucas Stal and his team from 7-11 September at NIOZ on Texel. With the Ocean auditorium fully booked (215 participants), this was the best attended symposium ever at NIOZ. For cyanobacteria the phrase 'microscopically small but giants in evolution' is very true. Cyanobacteria were the first organisms that could produce sugars and oxygen from carbon dioxide, sunlight and water in earth's history and developed already close to 3 billion years ago. The chloroplasts in all higher multicellular plants originate from incorporated cyanobacteria, giving them the possibility for photosynthesis. Cyanobacteria also have a lot of modern applied science possibilities, which was an important topic at the symposium.

North Sea Days

The North Sea Days (NSD) are organised annually to bring together scientists, policy makers and the maritime industry. The main organizing partners are Deltares, IMARES, NIOZ and Rijkswaterstaat. This year, the NSD took place on 2 and 3 October at NIOZ-Texel with the theme 'Living with a changing North Sea; Horizon 2050'. The symposium was attended by 119 participants. One of the highlights was the presentation of the digital book De Staat van de Noordzee (in Dutch), compiled by Prof Peter Herman, Dr Olivier Bouchard and Dr Luca van Duren (Deltares). The book gives infographic overviews of the many changes that took place in the North Sea during the past decades. Together with the report of the NSD 2014, it can be downloaded from the website www.noordzeedagen.nl.

Participants could vote by putting there caps on or off.

NIOZ fyke

The NIOZ fyke is assembled each year in spring by Hans Witte and Sieme Gieles.

The NIOZ fyke has been standing in the Mokbaai since 1960. Since that time many changes in the fish population of the Marsdiep have occurred. These data are now easily accessible to everybody via the website www.waddenzeevismonitor.nl. Many fish species declined but some became more populous in the Marsdiep, among them species from more southern latitudes, such as sea bass, suggesting climate change as one of the possible causes.

Clearly a talent for the future!

Open Day Texel

An Open day for the public was held on Texel on 4 October attracting 900 visitors to the institute. Scientists told them about species changes in the Wadden Sea, the danger of microplastics, and climate change. Our scientists gave lectures on a wide variety of subjects, from the importance of internal waves for mixing in the deep ocean to the trips of individually tagged sea gulls. Children were given the opportunity to do various experiments and explore the NIOZ facilities. The youngest visitors could do their own experiments and participate in a contest during their exploration through the building The winners visited the NIOZ fyke in the Mokbaai and they had a 'Royal Excursion' to the NIOZ Seaweed Centre.

sustainability

Sampling plot for seaweed growth in the intertidal zone.

Cold water coral reefs provide a home for a large abundance for species.

King Willem Alexander is clearly impressed by the size in the experimental tanks.

The first 'expert centre' at NIOZ, bringing the deep sea experise of all departments together.

As the NIOZ mission is to gain and communicate scientific knowledge of seas and oceans for the understanding and sustainability of our planet, the NIOZ respects the environment and takes action to work in a sustainable way. On the one hand the NIOZ makes efforts to optimise its daily working processes and chooses for the most sustainable solutions, whereas on the other hand sustainable management of resources and dealing responsibly with our environment, and the seas, oceans and coastal zones in particular, is the scope of a substantial part of our research.

Tangible steps that have been made in 2014 regarding health, safety and environment include:

- A start has been made to draw up procedures for working alone in laboratories and working outside office hours, to find a balance between energy saving and safety on the working floor. There has also been special attention (formation of a working group) for working with dangerous substances. In addition to the periodic medical inspections for ship crew and fire service, several non-routine medical inspections for personnel on foreign vessels have taken place.
- Clear procedures have been formulated about working with exotic or potentially invasive species. For example, in 2014 at NIOZ-Yerseke a system was installed to prevent the transfer of species from the experimental facilities into the environment (as is already operational at NIOZ-Texel).
- The oil- and gasoil-tanks at NIOZ-Texel have been replaced with new tanks and a new pump that meet the quality standards for the coming years. All light fixtures that were in need of replacement have been replaced with energy efficient lamps; e.g. outdoor lighting was replaced by LED lighting, and the separate collection of plastic waste appeared to be efficient.
- The Monitor Taskforce (MON) of the NIOZ will include principles of the Corporate Social Responsibility (CSR) guidelines in the next update of its Quality Management System. The operating procedures are ISO 9001 certified. Additionally, MON is preparing the extension of the scope of its NEN-EN-ISO/IEC 17025 accreditation of the technical analysis. The aim is to include the analyses of the Yerseke Analytical Laboratory and the NIOZ Ballast Water Test Facility & Research Centre.

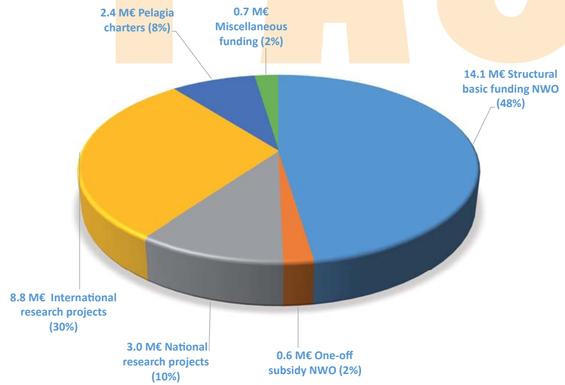
Examples of research projects with important sustainability aspects for 2014 are:

- The NIOZ, and the department of Marine Microbiology in particular, plays an important role in the InteSusAL (Integrated Sustainable Algae) project. The overall project objective is to demonstrate an integrated approach to generate biofuels from algae in a sustainable manner on an industrial scale. Both economic and environmental sustainability receive attention in the project where production technologies to achieve algae cultivation targets (90-120 dry tons per hectare per annum) are demonstrated and where working with a closed carbon loop across the whole process is considered. The ultimate goal is that high quality biofuel will widely replace mineral fuels.
- The Netherlands Seaweed Science Centre at NIOZ-Texel performs and facilitates important research on the cultivation of seaweeds. Seaweeds are an attractive source of biomass for energy (polysaccharides), food and feed (proteins), and high added value bio-active products, which do not need precious freshwater and do not claim agricultural soil. They grow on available nutrients in the sea (even reducing eutrophication) and do not need application of pesticides. Seaweeds also fix the greenhouse gas CO_2, and produce oxygen. Therefore seaweed cultivation can give a substantial boost to the development of a bio-based economy.
- The Netherlands Deep Sea Science & Technology Centre of the NIOZ aims to do independent research for a sustainable management of emerging open ocean resources. With a growing world population, sources for raw materials, food, water, and energy might become limited. Deep sea mining and exploration might be a solution. NIOZ will investigate the potentials of resource utilisation, while coping with the general threats like climate change, loss of biodiversity and habitat destruction, overfishing, and pollution, whilst maintaining the delicate balance between People, Profit and the Planet.
- In 2014 the NIOZ and its Monitor Taskforce in particular was involved in research on 'native macro algae-friendly concrete columns' in order to support weed community restoration, where the potentials for seagrass reintroduction are also still under investigation. One of the NIOZ projects in close cooperation with the stakeholder community focused on opportunities to counter negative impacts of invasive exotic species (i.e. the Japanese oyster) on recreational sites. In another project, the NIOZ was involved in providing a science-based opinion on which marine exotic species are most eligible for selection in the EU exotic species regulation, for which EU countries will have to formulate specific policy and management to prevent introduction, further distribution, and adverse effects on indigenous species, ecosystems, and ecosystem-functions.

This is just a small sample of all the research initiatives ongoing in 2014 that are directly related to sustainability issues. Reviewing our projects will teach you that sustainability is in our genes.

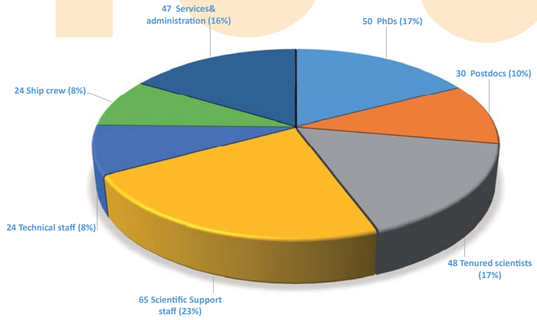
FACTS & FIGURES

Budget



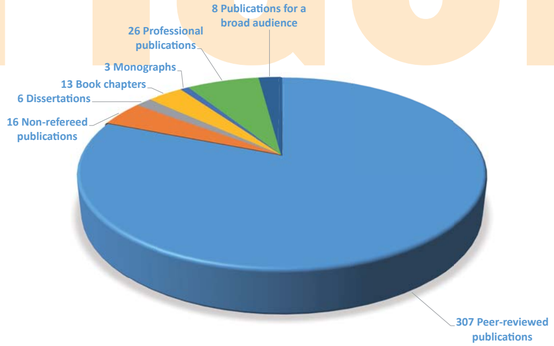
The overall budget for 2014 amounted to 31.2 M€. NWO contributed 14.1 M€ as basic structural funding (equivalent to 45% of the total budget) and 1.4 M€ (4%) as a one-off subsidy. Project related additional funding was received through national (3.8 M€; 12%) and international (8.8 M€; 28%) projects acquired through competition. Chartering of RV Pelagia to third parties yielded a net revenue of 2.4 M€ (8%). Miscellaneous and ad hoc funding amounted to 0.7 M€ (2%).
From a financial point of view, 2014 was better than 2013 due to the release of reserves and increased income from the RV Pelagia charters.

Staff



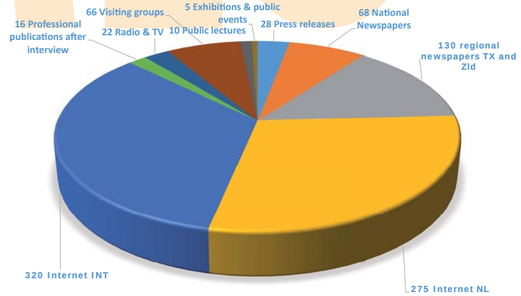
At 31 December 2014, NIOZ employed a full-time equivalent (FTE) of 288, with a total headcount of 323 employees. Of this total, 88 employees were of foreign nationality, representing 20 different countries. Total staff decreased by 21 FTE from 2013. The numbers and relative distribution in % of personnel over the different staff categories remained fairly constant. Scientific staff, including tenured senior scientists, postdocs and PhD students accounted for 44% (2013:45%) of the total staff, scientific support staff 23% (25%), and technical staff, ship crew, and services & administration accounted for 33% (30%).

Scientific output



NIOZ scientists authored an all-time record of 307 peer-reviewed publications, 3 books (monographs), 13 chapters in books, 16 non-refereed publications and 26 publications in journals for a professional audience. Six PhD students received their degrees at the Groningen University (3), Utrecht University (2), and VU University Amsterdam (1). Out of this total, 45 % appeared as open access publications, also a record high and a large increase compared to 2013 (16%). 263 oral presentations were given and 127 posters were presented at symposia and workshops throughout the world. For our colloquium series, Texel and Yerseke are now well connected via a web-conferencing system; 35 presentations were given by NIOZ and guest scientists.

Public outreach



NIOZ research was mentioned 68 times in national newspapers, 130 times in regional newspapers from the Texel and Zeeland area, 275 times on the internet nationally and 320 times internationally (source meltwater News database) and 16 publications were written by journalists in professional journals following interviews with NIOZ scientists. This annual report features some of these highlights. Our scientists appeared 22 times on radio or TV and gave 10 public lectures. Highlights for public outreach included the opening of the Seaweed Research Centre to the public in the afternoon directly after the official opening by HM King Willem Alexander on 10 April and the open day for the entire institute on Texel on 4 October. Additionally, NIOZ had a stand in 5 exhibitions or markets.

ANNUAL REPORT

2014

Supplement

ROYAL NETHERLANDS INSTITUTE FOR SEA RESEARCH

Contents

Peer-reviewed articles

Abouchami, W.; Galer, S.J.G.; de Baar, H.J.W.; Middag, R.; Vance, D.; Zhao, Y.; Klunder, M.; Mezger, K.; Feldmann, H.; Andreae, M.O. (2014). Biogeochemical cycling of cadmium isotopes in the Southern Ocean along the Zero Meridian. *Geochim. Cosmochim. Acta 127*: 348-367. dx.doi.org/10.1016/j.gca.2013.10.022

Abril, G.; Martinez, J.M.; Artigas, L.F.; Moreira-Turcq, P.; Benedetti, M.F.; Vidal, L.; Meziane, T.; Kim, J.-H.; Bernardes, M.C.; Savoye, N.; Deborde, J.; Souza, E.L.; Alberic, P.; de Souza, M.F.L.; Roland, F. (2014). Amazon River carbon dioxide outgassing fuelled by wetlands. *Nature (Lond.) 505(7483)*: 395-398. dx.doi.org/10.1038/nature12797

Adhitya, A.; Bouma, T.; Folkard, A.M.; van Katwijk, M.M.; Callaghan, D.; de Longh, H.H.; Herman, P.M.J. (2014). Comparison of the influence of patch-scale and meadow-scale characteristics on flow within seagrass meadows: a flume study. *Mar. Ecol. Prog. Ser. 516*: 49-59. dx.doi.org/10.3354/meps10873

Adrian-Martinez, S.; ANTARES Collaboration (Haren, H. van) (2014). A search for neutrino emission from the Fermi bubbles with the ANTARES telescope. *Eur. Phys. J. C 74(2)*: 2701 1-7. dx.doi.org/10.1140/epjc/s10052-013-2701-6 [OA gold]

Adrian-Martinez, S.; ANTARES Collaboration; (Haren, H. van) (2014). A search for time dependent neutrino emission from microquasars with the ANTARES telescope. *Journal of High Energy Astrophysics 3-4*: 9-17. dx.doi.org/10.1016/j.jheap.2014.06.002 [OA green]

Adrian-Martinez, S.; ANTARES Collaboration (Haren, H. van) (2014). Constraining the neutrino emission of gravitationally lensed Flat-Spectrum Radio Quasars with ANTARES data. *Journal of Cosmology and Astroparticle Physics. november*: 1-11. dx.doi.org/10.1088/1475-7516/2014/11/017 [OA gold]

Adrian-Martinez, S.; KM3NeT Collaboration (Haren, H. van) (2014). Deep sea tests of a prototype of the KM3NeT digital optical module. *Eur. Phys. J. C 74(3056)*: 8 pp. dx.doi.org/10.1140/epjc/s10052-014-3056-3 [OA gold]

Adrian-Martinez, S.; ANTARES Collaboration (Haren, H. van) (2014). Searches for clustering in the time integrated skymap of the ANTARES neutrino telescope. *Journal of Cosmology and Astroparticle Physics 2014(5)*: 1-13. dx.doi.org/10.1088/1475-7516/2014/05/001 [OA green]

Adrian-Martinez, ANTARES Collaboration (Haren, H. van) (2014). Searches for point-like and extended neutrino sources close to the galactic center using the ANTARES neutrino telescope. *Astrophys. J. Lett. 786(1)*: 1-18. dx.doi.org/10.1088/2041-8205/786/1/L5 [OA green]

Agawin, N.S.R.; Benavides, M.; Busquets, A.; Ferriol, P.; Stal, L.J.; Aristegui, J. (2014). Dominance of unicellular cyanobacteria in the diazotrophic community in the Atlantic Ocean. *Limnol. Oceanogr. 59(2)*: 623-637. hdl.handle.net/10.4319/lo.2014.59.2.0623 [OA gold]

Ahmed, M.; Stal, L.J.; Hasnain, S. (2014). Biofilm Formation and Indole-3-Acetic Acid Production by Two Rhizospheric Unicellular Cyanobacteria. *J. Microbiol. Biotechnol. 24(8)*: 1015-1025. hdl.handle.net/10.4014/jmb.1310.10099 [OA gold]

Ahmed, M.; Wijnholds, A.; Stal, L.J.; Hasnain, S. (2014). Isolation, characterization and localization of extracellular polymeric substances from the cyanobacterium *Arthrospira platensis* strain MMG-9. *Eur. J. Phycol. 49(2)*: 143-150. dx.doi.org/10.1080/09670262.2014.895048

Ahmed, M.; Stal, L.; Hasnain, S. (2014). The morphology and bioactivity of the rice field cyanobacterium *Leptolyngbya*. *Rev. Biol. Trop. 62(3)*: 1251-1260 dx.doi.org/10.15517/rbt.v62i3.8657 [OA gold]

Ahmedou Salem, M.V.; van der Geest, M.; Piersma, T.; Saoud, Y.; van Gils, J.A. (2014). Seasonal changes in mollusc abundance in a tropical intertidal ecosystem, Banc d'Arguin (Mauritania): Testing the 'depletion by shorebirds' hypothesis. *Est., Coast. and Shelf Sci. 136*: 26-34. dx.doi.org/10.1016/j.ecss.2013.11.009 [OA gold]

Andresen, H.; Strasser, M.; van der Meer, J. (2014). Estimation of Density-Dependent Mortality of Juvenile Bivalves in the Wadden Sea. *PLoS One 9(8)*: e102491. dx.doi.org/10.1371/journal.pone.0102491 [OA gold]

Augustine, S.; Jaspers, C.; Kooijman, S.A.L.M.; Carlotti, F.; Poggiale, J.-C.; Freitas, V.; van der Veer, H.W.; van Walraven, L. (2014). Mechanisms behind the metabolic flexibility of an invasive comb jelly. *J. Sea Res. 94*: 156-165. dx.doi.org/10.1016/j.seares.2014.09.005

Baldrighi, E.; Lavaleye, M.; Aliani, S.; Conversi, A.; Manini, E. (2014). Large Spatial Scale Variability in Bathyal Macrobenthos Abundance, Biomass, a- and b-Diversity along the Mediterranean Continental Margin. *PLoS One 9(9)*: e107261. dx.doi.org/10.1371/journal.pone.0107261 [OA gold]

Bale, N.; Villanueva, L.; Fan, H.; Hopmans, E.C.; Schouten, S.; Sinninghe Damsté, J.S.; Stal, L.J. (2014). Occurrence and activity of anammox bacteria in surface sediments of the southern North Sea. *FEMS Microbiol. Ecol. 89(1)*: 99–110. hdl.handle.net/10.1111/1574-6941.12338

Balke, T.; Herman, P.M.J.; Bouma, T.J. (2014). Critical transitions in disturbance-driven ecosystems: identifying Windows of Opportunity for recovery. *J. Ecol. 102(3)*: 700-708. dx.doi.org/10.1111/1365-2745.12241

Barnes, M.K.; Tilstone, G.H.; Smyth, T.J.; Suggett, D.J.; Astoreca, R.; Lancelot, C.; Kromkamp, J.C. (2014). Absorption-based algorithm of primary production for total and size-fractionated phytoplankton in coastal waters. *Mar. Ecol. Prog. Ser. 504*: 73–89. hdl.handle.net/10.3354/meps10751 [OA gold]

Baroni, I.R.; Topper, R.P.M.; van Helmond, N.A.G.M.; Brinkhuis, H.; Slomp, C.P. (2014). Biogeochemistry of the North Atlantic during oceanic anoxic event 2: role of changes in ocean circulation and phosphorus input. *Biogeosciences 11(4)*: 977-993. dx.doi.org/10.5194/bg-11-977-2014 [OA gold]

Bauersachs, T.; Schouten, S.; Schwark, L. (2014). Characterization of the sedimentary organic matter preserved in Messel oil shale by bulk geochemistry and stable isotopes. *Palaeogeogr. Palaeoclimatol. Palaeoecol. 410*: 390-400. hdl.handle.net/10.1016/j.palaeo.2014.06.015

Bauersachs, T.; Stal, L.J.; Grego, M.; Schwark, L.; Schwark, L. (2014). Temperature induced changes in the heterocyst glycolipid composition of N_2 fixing heterocystous cyanobacteria. *Org. Geochem. 69*: 98-105. dx.doi.org/10.1016/j.orggeochem.2014.02.006

Beauchard, O.; Teuchies, J.; Jacobs, S.; Struyf, E.; Van der Spiet, T.; Meire, P. (2014). Sediment abiotic patterns in current and newly created intertidal habitats from an impacted estuary. *Est. Coast. 37(4)*: 973-985. hdl.handle.net/10.1007/s12237-013-9743-8

Berke, M.A.; Johnson, T.C.; Werne, J.P.; Livingstone, D.R.; Grice, K.; Schouten, S.; Sinninghe Damsté, J.S. (2014). Characterization of the last deglacial transition in tropical East Africa: Insights from Lake Albert. *Palaeogeogr. Palaeoclimatol. Palaeoecol. 409*: 1-8. hdl.handle.net/10.1016/j.palaeo.2014.04.014

Best, M.; Favali, P.; Beranzoli, L.; Cannat, M.; Cagatay, Namik; Dañobeitia, J.J.; Delory, E.; de Stigter, H.; Ferré, B.; Gillooly, M.; Grant, F.; Hall, P.O.J.; Lykousis, V.; Mienert, J.; de Miranda, J.M.A.; Oaie, G.; Radulescu, V.; Rolin, J.F.; Ruhl, H.A.; Waldmann, C. (2014). EMSO: A distributed infrastructure for addressing geohazards and global ocean change. *Oceanography 27(2)*: 167–169. dx.doi.org/10.5670/oceanog.2014.52 [OA gold]

Beukema, J.J.; Cadée, G.C.A.; Dekker, R.; Philippart, C.J.M. (2014). Annual and spatial variability in gains of body weight in *Macoma balthica* (L.): Relationships with food supply and water temperature. *J. Exp. Mar. Biol. Ecol. 457*: 105-112. hdl.handle.net/10.1016/j.jembe.2014.04.003

Beukema, J.J.; Dekker, R. (2014). Variability in predator abundance links winter temperatures and bivalve recruitment: correlative evidence from long-term data in a tidal flat. *Mar. Ecol. Prog. Ser. 513*: 1-15. hdl.handle.net/10.3354/meps10978 [OA gold]

Biber, M.F.; Duineveld, G.C.A.; Lavaleye, M.S.S.; Davies, A.J.; Bergman, M.J.N.; van den Beld, I.M.J. (2014). Investigating the association of fish abundance and biomass with cold-water corals in the deep Northeast Atlantic Ocean using a generalised linear modelling approach. *Deep-Sea Res., Part 2, Top. Stud. Oceanogr. 99*: 134-145. dx.doi.org/10.1016/j.dsr2.2013.05.022

Bijleveld, A.I.; Massourakis, G.; van der Marel, A.; Dekinga, A.; Spaans, B.; van Gils, J.A.; Piersma, T. (2014). Personality drives physiological adjustments and is not related to survival. *Proc. - Royal Soc., Biol. Sci. 281*: 20133135. dx.doi.org/10.1098/rspb.2013.3135 [OA gold]

Blanchet, C.L.; Frank, M.; Schouten, S. (2014). Asynchronous Changes in Vegetation, Runoff and Erosion in the Nile River Watershed during the Holocene. *PLoS One 9(12)*: e115958. dx.doi.org/10.1371/journal.pone.0115958 [OA gold]

Blyth, A.J.; Jex, C.N.; Baker, A.; Khan, S.J.; Schouten, S. (2014). Contrasting distributions of glycerol dialkyl glycerol tetraethers (GDGTs) in speleothems and associated soils. *Org. Geochem. 69*: 1-10. dx.doi.org/10.1016/j.orggeochem.2014.01.013

Bleijswijk, J. van; Begeman, L.; Witte, H.J.; IJsseldijk, L.L.; Brasseur, S.M.J.M.; Gröne, A.; Leopold, M.F. (2014). Detection of grey seal *Halichoerus grypus* DNA in attack wounds on stranded harbour porpoises *Phocoena phocoena*. *Mar. Ecol. Prog. Ser. 513*: 277-281. hdl.handle.net/10.3354/meps11004 [OA gold]

Boer, B. de; Stocchi, P.; van de Wal, R.S.W. (2014). A fully coupled 3-D ice-sheet–sea-level model: algorithm and applications. *Geosci. Model Dev. 7*: 2141-2156. dx.doi.org/10.5194/gmd-7-2141-2014 [OA green-

Boer, E.J. de; Tjallingii, R.; Vélez, M.I.; Rijsdijk, K.F.; Vlug, A.; Reichart, G.-J.; Prendergast, A.L.; de Louw, P.G.B.; Florens, F.B.V.; Baider, C.; Hooghiemstra, H. (2014). Climate variability in the SW Indian Ocean from an 8000-yr long multi-proxy record in the Mauritian lowlands shows a middle to late Holocene shift from negative IOD-state to ENSO-state. *Quat. Sci. Rev. 86*: 175-189. dx.doi.org/10.1016/j.quascirev.2013.12.026

Bolhuis, H.; Cretoiu, M.S.; Stal, L.J. (2014). Molecular ecology of microbial mats. *FEMS Microbiol. Ecol. 90(2)*: 335-350. dx.doi.org/10.1111/1574-6941.12408 [OA gold]

Bolhuis, H.; Schluepmann, H.; Kristalijn, J.; Sulaiman, Z.; Marshall, D.J. (2014). Molecular analysis of bacterial diversity in mudflats along the salinity gradient of an acidified tropical Bornean estuary (South East Asia). *Aquatic Biosystems 10(10)*: 13 pp. dx.doi.org/10.1186/2046-9063-10-10

Bom, R.A.; Bouten, W.; Piersma, T.; Oosterbeek, K.; van Gils, J.A. (2014). Optimizing acceleration-based ethograms: the use of variable-time versus fixed-time segmentation. *Movement Ecology 2(6)*: 1-8. hdl.handle.net/10.1186/2051-3933-2-6 [OA gold]

Booij, K.; van Bommel, R.; van Aken, H.M.; van Haren, H.; Brummer, G.J.A.; Ridderinkhof, H. (2014). Passive sampling of nonpolar contaminants at three deep-ocean sites. *Environ. Pollut. 195*: 101-108. dx.doi.org/10.1016/j.envpol.2014.08.013

Borsje, B.W.; Bouma, T.J.; Rabaut, M.; Herman, P.M.J.; Hulscher, S.J.M.H.; Borsje, B.W.; Herman, P.M.J. (2014). Formation and erosion of biogeomorphological structures: A model study on the tube-building polychaete *Lanice conchilega*. *Limnol. Oceanogr. 59(4)*: 1297-1309. hdl.handle.net/10.4319/lo.2014.59.4.1297

Bosboom, R.; Dupont-Nivet, G.; Grothe, A.; Brinkhuis, H.; Villa, G.; Mandic, O.; Stoica, M.; Huang, W.; Yang, W.; Guo, Z.; Krijgsman, W. (2014). Linking Tarim Basin sea retreat (west China) and Asian aridification in the late Eocene. *Basin Res. 26(5)*: 621–640. dx.doi.org/10.1111/bre.12054

Boschker, H.T.S.; Vasquez-Cardenas, D.; Bolhuis, H.; Moerdijk-Poortvliet, T.C.W.; Moodley, L. (2014). Chemoautotrophic Carbon Fixation Rates and Active Bacterial Communities in Intertidal Marine Sediments. *PLoS One 9(7)*: e101443 1-12. hdl.handle.net/10.1371/journal.pone.0101443 [OA gold]

Bougeois, L.; de Rafelis, M.; Reichart, G.-J.; de Nooijer, L.J.; Nicollin, F.; Dupont-Nivet, G. (2014). A high resolution study of trace elements and stable isotopes in oyster shells to estimate Central Asian Middle Eocene seasonality. *Chem. Geol. 363*: 200-212. dx.doi.org/10.1016/j.chemgeo.2013.10.037

Bouma, T.J.; van Belzen, J.; Balke, T.; Zhu, Z.; Airoldi, L.; Blight, A.J.; Davies, A.J.; Galván, C.; Hawkins, S.J.; Hoggart, S.P.G.; Lara, J.L.; Losada, I.J.; Maza, M.; Ondiviela, B.; Skov, M.W.; Strain, E.M.; Thompson, R.C.; Yang, S.L.; Zanuttigh, B.; Zhang, L.; Herman, P.M.J. (2014). Identifying knowledge gaps hampering application of intertidal habitats in coastal protection: Opportunities & steps to take. *Coast. Eng. 87*: 147-157. dx.doi.org/10.1016/j.coastaleng.2013.11.014

Braeckman, U.; Van Colen, C.; Guilini, K.; Van Gansbeke, D.; Soetaert, K.; Vincx, M.; Vanaverbeke, J. (2014). Empirical Evidence Reveals Seasonally Dependent Reduction in Nitrification in Coastal Sediments Subjected to Near Future Ocean Acidification. *PLoS One 9(10)*: e108153. dx.doi.org/10.1371/journal.pone.0108153 [OA gold]

Braeckman, U.; Yazdani Foshtomi, M.; Van Gansbeke, D.; Meysman, F.; Soetaert, K.; Vincx, M.; Vanaverbeke, J. (2014). Variable importance of macrofaunal functional biodiversity for biogeochemical cycling in temperate coastal sediments. *Ecosystems 17(4)*: 720-737. dx.doi.org/10.1007/s10021-014-9755-7

Bree, L.G.J. van; Rijpstra, W.I.C.; Cocquyt, C.; Al-Dhabi, N.-A.; Verschuren, D.; Sinninghe Damsté, J.S.; de Leeuw, J.W. (2014). Origin and palaeoenvironmental significance of C_{25} and C_{27} n-alk-1-enes in a 25,000-year lake-sedimentary record from equatorial East Africa. *Geochim. Cosmochim. Acta 145*: 89–102. dx.doi.org/10.1016/j.gca.2014.08.035 [OA green]

Buckles, L.K.; Weijers, J.W.H.; Tran, X.-M.; Waldron, S.; Sinninghe Damsté, J.S. (2014). Provenance of tetraether membrane lipids in a large temperate lake (Loch Lomond, UK): implications for glycerol dialkyl glycerol tetraether (GDGT)-based palaeothermometry. *Biogeosciences 11*: 5539-5563. dx.doi.org/10.5194/bg-11-5539-2014 [OA gold]

Buckles, L.K.; Weijers, J.W.H.; Verschuren, D.; Sinninghe Damsté, J.S. (2014). Sources of core and intact branched tetraether membrane lipids in the lacustrine environment: Anatomy of Lake Challa and its catchment, equatorial East Africa. *Geochim. Cosmochim. Acta 140*: 106-126. hdl.handle.net/10.1016/j.gca.2014.04.042 [OA green]

Burazerovic, D.; Heylen, R.; Raymaekers, D.; Knaeps, E.; Philippart, C.J.M.; Scheunders, P. (2014). A Spectral-Unmixing Approach to Estimate Water–Mass Concentrations in Case 2 Waters. *IEEE J. Sel. Top. Appl. Earth Observ. Remote Sens. 7(8)*: 3595-3605. dx.doi.org/10.1109/JSTARS.2014.2345562

Burt, W.J.; Thomas, H.; Pätsch, J.; Omar, A.; Schrum, C.; Daewel, U.; Brenner, H.; de Baar, H.J.W. (2014). Radium isotopes as a tracer of sediment-water column exchange in the North Sea. *Global Biogeochem. Cycles 28(8)*: 786–804. dx.doi.org/10.1002/2014GB004825

Cadée, G.C. (2014). Vloedmerken, bedreigde soortenrijke minimilieus op het strand. *Entomol. Ber. 1-2*: 3-12

Capelle, J.J.; Wijsman, J.W.M.; Schellekens, T.; van Stralen, M.R.; Herman, P.M.J.; Smaal, A.C. (2014). Spatial organisation and biomass development after relaying of mussel seed. *J. Sea Res. 85*: 395-403. dx.doi.org/10.1016/j.seares.2013.07.011

Carnat, G.; Zhou, J.; Papakyriakou, T.; Delille, B.; Goossens, T.; Haskell, T.; Schoemann, V.; Fripiat, F.; Rintala, J.-M.; Tison, J.-L. (2014). Physical and biological controls on DMS,P dynamics in ice shelf-influenced fast ice during a winter-spring and a spring-summer transitions. *J. Geophys. Res. Oceans: 119(5)*: 2882-2905. hdl.handle.net/10.1002/2013JC009381

Caulle, C.; Koho, K.A.; Mojtahid, M.; Reichart, G.J.; Jorissen, F.J. (2014). Live (Rose Bengal stained) foraminiferal faunas from the northern Arabian Sea: faunal succession within and below the OMZ. *Biogeosciences 11(4)*: 1155-1175. dx.doi.org/10.5194/bg-11-1155-2014 [OA gold]

Chevalier, N.; Bouloubassi, I.; Stadnitskaia, A.; Taphanel, M.H.; Sinninghe Damsté, J.S. (2014). Lipid biomarkers for anaerobic oxidation of methane and sulphate reduction in cold seep sediments of Nyegga pockmarks (Norwegian margin): discrepancies in contents and carbon isotope signatures. *Geo-Mar. Lett. 34(2-3)*: 269-280. dx.doi.org/10.1007/s00367-014-0363-5

Chivall, D.; M'Boule, D.; Sinke-Schoen, D.; Sinninghe Damsté, J.S.; Schouten, S.; van der Meer, M.T.J. (2014). Impact of salinity and growth phase on alkenone distributions in coastal haptophytes. *Org. Geochem. 67*: 31-34. dx.doi.org/10.1016/j.orggeochem.2013.12.002 [OA green]

Chivall, D.; M'Boule, D.; Sinke-Schoen, D.; Sinninghe Damsté, J.S.; Schouten, S.; van der Meer, M.T.J. (2014). The effects of growth phase and salinity on the hydrogen isotopic composition of alkenones produced by coastal haptophyte algae. *Geochim. Cosmochim. Acta 140*: 381–390. hdl.handle.net/10.1016/j.gca.2014.05.043 [OA green]

Christianen, M.J.A.; Herman, P.M.J.; Bouma, T.J.; vn Katwijk, M.M.; Lamers, L.P.M.; van der Heide, T.; Mumby, P.J.; Silliman, B.R.; Engelhard, S.L.; van de Kerk, M.V.; Kiswara, W.; van de Koppel, J. (2014). Habitat collapse due to overgrazing threatens turtle conservation in marine protected areas. *Proc. - Royal Soc., Biol. Sci. 281(1777)*: 20132890. dx.doi.org/10.1098/rspb.2013.2890

Clavier, J.; Chauvaud, L.; Amice, E.; Lazure, P.; van der Geest, M.; Labrosse, P.; Diagne, A.; Carlier, A.; Chauvaud, S. (2014). Benthic metabolism in shallow coastal ecosystems of the Banc d'Arguin, Mauritania. *Mar. Ecol. Prog. Ser. 501*: 11-23. dx.doi.org/10.3354/meps10683

Climatoribus, A.; van Haren, H.; Gostiaux, L. (2014). Comparison of Ellison and Thorpe scales from Eulerian ocean temperature observations. *J. Geophys. Res. Oceans 119(10)*: 7047–7065. dx.doi.org/10.1002/2014JC010132 [OA green]

Colin, C.; Siani, G.; Liu, Z.; Blamart, D.; Skonieczny, C.; Zhao, Y.; Bory, A.; Frank, N.; Duchamp-Alphonse, S.; Thil, F.; Richter, T.; Kissel, C.; Gargani, J. (2014). Late Miocene to early Pliocene climate variability off NW Africa (ODP Site 659). *Palaeogeogr. Palaeoclimatol. Palaeoecol. 401*: 81-95. dx.doi.org/10.1016/j.palaeo.2014.02.015

Contreras, L.; Pross, J.; Bijl, P.K.; O'Hara, R.B.; Raine, J.I.; Sluijs, A.; Brinkhuis, H. (2014). Southern high-latitude terrestrial climate change during the Palaeocene–Eocene derived from a marine pollen record (ODP Site 1172, East Tasman Plateau). *Clim. Past 10*: 1401-1420. hdl.handle.net/10.5194/cp-10-1401-2014 [OA gold]

Convey, P.; Chown, S.; Clarke, A.; Barnes, D.K.A.; Bokhorst, S.; Cummings, V.; Ducklow, H.W.; Frati, F.; Green, T.G.A.; Gordon, S.; Griffiths, H.J.; Howard-Williams, C.; Huiskes, A.H.L.; Laybourn-Parry, J.; Lyons, W.B.; McMinn, A.; Morley, S.A.; Peck, L.S.; Quesada, A.; Robinson, S.A.; Schiaparelli, S.; Wall, D.H. (2014). The spatial structure of Antarctic biodiversity. *Ecol. Monogr. 84(2)*: 203-244. dx.doi.org/10.1890/12-2216.1 [OA green]

Cornelissen, I.J.M.; Silsbe, G.M.; Verreth, J.A.J.; van Donk, E.; Nagelkerke, L.A.J. (2014). Dynamics and limitations of phytoplankton biomass along a gradient in Mwanza Gulf, southern Lake Victoria (Tanzania). *Freshwat. Biol. 59(1)*: 127-141. dx.doi.org/10.1111/fwb.12253 [OA gold]

Corte, D. de; Lekunberri, I.; Sintes, E.; Garcia, J.A.L.; Gonzalez, S.; Herndl, G.J. (2014). Linkage between copepods and bacteria in the North Atlantic Ocean. *Aquat. Microb. Ecol. 72*: 215-225. hdl.handle.net/10.3354/ame01696 [OA gold]

Cozzoli, F.; Eelkema, M.; Bouma, T.J.; Ysebaert, T.; Escaravage, V.; Herman, P.M.J. (2014). A Mixed Modeling Approach to Predict the Effect of Environmental Modification on Species Distributions. *PLoS One 9(2)*: e89131. dx.doi.org/10.1371/journal.pone.0089131 [OA gold]

Crowe, M.A.; Power, J.F.; Morgan, X.C.; Dunfield, P.F.; Lagutin, K.; Rijpstra, W.I.C.; Vyssotski, M.; Sinninghe Damsté, J.S.; Houghton, K.M.; Ryan, J.L.J.; Stott, M.B. (2014). *Pyrinomonas methylaliphatogenes* gen. nov., sp. nov., a novel group 4 thermophilic member of the phylum *Acidobacteria* from geothermal soils. *Int. J. Syst. Evol. Microbiol. 64*: 220-227. hdl.handle.net/10.1099/ijs.0.055079-0

Dale, A.W.; Sommer, S.; Ryabenko, E.; Noffke, A.; Bohlen, L.; Wallmann, K.; Stolpovsky, K.; Greinert, J.; Pfannkuche, O. (2014). Benthic nitrogen fluxes and fractionation of nitrate in the Mauritanian oxygen minimum zone (Eastern Tropical North Atlantic). *Geochim. Cosmochim. Acta 134*: 234-256. dx.doi.org/10.1016/j.gca.2014.02.026

De Deckker, P.; Munday, C.I.; Brocks, J.; O'Loingsigh, T.; Allison, G.E.; Hope, J.; Norman, M.; Stuut, J.-B.; Tapper, N.J.; van der Kaars, S. (2014). Characterisation of the major dust storm that traversed over eastern Australia in September 2009; a multidisciplinary approach. *Aeolian Research 15*: 133-149. dx.doi.org/doi.org/10.1016/j.aeolia.2014.07.003

Dekker, R.; Beukema, J.J. (2014). Phenology of abundance of bivalve spat and of their epibenthic predators: limited evidence for mismatches after cold winters. *Mar. Ecol. Prog. Ser. 513*: 17-27. hdl.handle.net/10.3354/meps10989

Denderen, D. van; Hintzen, N.T.; Rijnsdorp, A.D.; Ruardij, P.; van Kooten, T. (2014). Habitat-Specific Effects of Fishing Disturbance on Benthic Species Richness in Marine Soft Sediments. *Ecosystems 17(7)*: 1216-1226. dx.doi.org/10.1007/s10021-014-9789-x

Deng, F.F.; Thomas, A.L.; Rijkenberg, M.J.A.; Henderson, G.M. (2014). Controls on seawater ^{231}Pa, ^{230}Th and ^{232}Th concentrations along the flow paths of deep waters in the Southwest Atlantic. *Earth Planet. Sci. Lett. 390*: 93-102. dx.doi.org/10.1016/j.epsl.2013.12.038

Deplazes, G.; Lückge, A.; Stuut, J.-B.; Pätzold, J.; Kuhlmann, H.; Husson, D.; Fant, M.; Haug, G.H. (2014). Weakening and strengthening of the Indian monsoon during Heinrich events and Dansgaard-Oeschger oscillations. *Paleoceanography 29(2)*: 99-114. dx.doi.org/10.1002/2013PA002509 [OA green]

Derrien, D.; Plain, C.; Courty, P.-E.; Gelhage, L.; Moerdijk-Poortvliet, T.C.W.; Thomas, F; Versini, A.; Zeller, B.; Koutika, L.-S.; Boschker, H.T.S.; Epron, D. (2014). Does the addition of labile substrate destabilise old soil organic matter? *Soil Biol. Biochem. 76*: 149-160. hdl.handle.net/10.1016/j.soilbio.2014.04.030

Donadi, S.; van der Zee, E.M.; van der Heide, T.; Weerman, E.J.; Piersma, T.; van de Koppel, J.; Olff, H.; Bartelds, M.; van Gerwen, I.; Eriksson, B.K. (2014). The bivalve loop: Intra-specific facilitation in burrowing cockles through habitat modification. *J. Exp. Mar. Biol. Ecol. 461*: 44–52. dx.doi.org/10.1016/j.jembe.2014.07.019

Douglas, P.M.J.; Affek, H.P.; Ivany, L.C.; Houben, A.J.P.; Sijp, W.P.; Sluijs, A.; Schouten, S.; Pagani, M. (2014). Pronounced zonal heterogeneity in Eocene southern high-latitude sea surface temperatures. *Proc. Natl. Acad. Sci. U.S.A. 111(18)*: 6582-6587. dx.doi.org/10.1073/pnas.1321441111

Duijns, S.; van Gils, J.A.; Spaans, B.; ten Horn, J.; Brugge, M.; Piersma, T. (2014). Sex-specific winter distribution in a sexually dimorphic shorebird is explained by resource partitioning. *Ecol. Evol. 4(20)*: 4009–4018. dx.doi.org/10.1002/ece3.1213 [OA gold]

Duijns, S.; Piersma, T. (2014). Interference competition in a sexually dimorphic shorebird: prey behaviour explains intraspecific competition. *Anim. Behav. 92*: 195-201. hdl.handle.net/10.1016/j.anbehav.2014.04.007

Dulaquais, G.; Boye, M.; Rijkenberg, M.J.A.; Carton, X. (2014). Physical and remineralization processes govern the cobalt distribution in the deep western Atlantic Ocean. *Biogeosciences 11(6)*: 1561-1580. dx.doi.org/10.5194/bg-11-1561-2014 [OA gold]

Duran-Matute, M.; Gerkema, T.; de Boer, G.J.; Nauw, J.; Grawe, U. (2014). Residual circulation and freshwater transport in the Dutch Wadden Sea: a numerical modelling study. *Ocean Sci. 10*: 611– 632. dx.doi.org/10.5194/os-10-611-2014 [OA gold]

Eisele, M.; Frank, N.; Wienberg, C.; Titschack, J.; Mienis, F; Beuck, L.; Tisnerat-Laborde, N.; Hebbeln, D. (2014). Sedimentation patterns on a cold-water coral mound off Mauritania. *Deep-Sea Res., Part 2, Top. Stud. Oceanogr. 99*: 307-315. dx.doi.org/10.1016/j.dsr2.2013.07.004

Eleveld, M.A.; van der Wal, D.; van Kessel, T. (2014). Estuarine suspended particulate matter concentrations from sun-synchronous satellite remote sensing: tidal and meteorological effects and biases. *Remote Sens. Environ. 143*: 204-215. hdl.handle.net/10.1016/j.rse.2013.12.019

El-Hacen, E.-H. M.; Piersma, T.; Jouta, J.; Overdijk, O.; Lok, T. (2014). Seasonal variation in the diet of Spoonbill chicks in the Wadden Sea: a stable isotopes approach. *Journ. Ornithol. 155*: 611-619. hdl.handle.net/10.1007/s10336-014-1043-y

Firth, L.B.; Thompson, R.C.; Bohn, K.; Abbiati, M.; Airoldi, L.; Bouma, T.J.; Bozzeda, F.; Ceccherelli, V.U.; Colangelo, M.A.; Evans, A.; Ferrario, F.; Hanley, M.E.; Hinz, H.; Hoggart, S.P.G.; Jackson, J.E.; Moore, P.; Morgan, E.H.; Perkol-Finkel, S.; Skov, M.W.; Strain, E.M.; van Belzen, J.; Hawkins, S.J. (2014). Between a rock and a hard place: Environmental and engineering considerations when designing coastal defence structures. *Coast. Eng. 87*: 122-135. dx.doi.org/10.1016/j.coastaleng.2013.10.015

Fleming, L.E.; McDonough, N.; Austen, M.; Mee, L.; Moore, M.; Hess, P.; Depledge, M.H.; White, M.; Philippart, K.; Bradbrook, P.; Smalley, A. (2014). Oceans and Human Health: A rising tide of challenges and opportunities for Europe. *Mar. Environ. Res. 99*: 16-19. hdl.handle.net/10.1016/j.marenvres.2014.05.010 [OA gold]

Folmer, E.O.; Drent, J.; Troost, K.; Büttger, H.; Dankers, N.; Jansen, J.; van Stralen, M.; Millat, G.; Herlyn, M.; Philippart, C.J.M. (2014). Large-Scale Spatial Dynamics of Intertidal Mussel (*Mytilus edulis L.*) Bed Coverage in the German and Dutch Wadden Sea. *Ecosystems 17(3)*: 550-566. dx.doi.org/10.1007/s10021-013-9742-4 [OA gold]

Fontanier, C.; Koho, K.A.; Goñi-Urriza, M.S.; Deflandre, B.; Galaup, S.; Ivanovsky, A.; Gayet, N.; Dennielou, B.; Gremare, A.; Bichon, S.; Gassie, C.; Anschutz, P.; Durán, R.; Reichart, G.J. (2014). Benthic foraminifera from the deep-water Niger delta (Gulf of Guinea): Assessing present-day and past activity of hydrate pockmarks. *Deep-Sea Res., Part 1, Oceanogr. Res. Pap. 94*: 87–106. dx.doi.org/10.1016/j.dsr.2014.08.011

Fontanier, C.; Duros, P.; Toyofuku, T.; Oguri, K.; Koho, K.A.; Buscail, R.; Grémare, A.; Radakovitch, O.; Deflandre, B.; de Nooijer, L.J.; Bichon, S.; Goubet, S.; Ivanovsky, A.; Chabaud, G.; Menniti, C.; Reichart, G.-J.; Kitazato, H. (2014). living (stained) deep-sea foraminifera off Hachinohe(NE Japan, Western Pacific): Environmental interplay in oxygen-depleted ecosystems. *Journal of Foraminiferal Research 44(3)*: 1-19 [OA green]

Frieling, J.; Iakovleva, A.I.; Reichart, G.-J.; Aleksandrova, G.N.; Gnibidenko, Z.N.; Schouten, S.; Sluijs, A. (2014). Paleocene–Eocene warming and biotic response in the epicontinental West Siberian Sea. *Geology (Boulder Colo.) 42(9)*: 767-770. dx.doi.org/10.1130/G35724.1

Gaag, M. van der; van der Velde, G.; Wijnhoven, S.; Rajagopal, S. (2014). Temperature dependent larval occurrence and spat settlement of the invasive brackish water bivalve *Mytilopsis leucophaeata* (Conrad, 1831) (Dreissenidae). *J. Sea Res. 87*: 30-34. dx.doi.org/10.1016/j.seares.2013.11.014

Gallego-Torres, D.; Romero, O.E.; Martínez-Ruiz, F.; Kim, J.-H.; Donner, B.; Ortega-Huertas, M. (2014). Rapid bottom-water circulation changes during the last glacial cycle in the coastal low-latitude NE Atlantic. *Quatern. Res. 81(2)*: 330-338. dx.doi.org/10.1016/j.yqres.2013.11.004 [OA green]

Gazeau, F.; van Rijswijk, P.; Pozzato, L.; Middelburg, J.J. (2014). Impacts of Ocean Acidification on Sediment Processes in Shallow Waters of the Arctic Ocean. *PLoS One 9(4)*: e94068. dx.doi.org/10.1371/journal.pone.0094068 [OA gold]

Geest, M. van der; Sall, A.A.; Ely, S.O.; Nauta, R.W.; van Gils, J.A.; Piersma, T. (2014). Nutritional and reproductive strategies in a chemosymbiotic bivalve living in a tropical intertidal seagrass bed. *Mar. Ecol. Prog. Ser. 501*: 113-126. dx.doi.org/10.3354/meps10702 [OA gold]

Gelder, A.H. van; Sousa, D.Z.; Rijpstra, W.I.C.; Sinninghe Damsté, J.S.; Stams, A.J.M.; Sánchez-Andrea, I. (2014). *Ercella succinigenes* gen. nov., sp. nov., ananaerobic succinate-producing bacterium. *Int. J. Syst. Evol. Microbiol. 64(7)*: 2449-2454. dx.doi.org/10.1099/ijs.0.058966-0

Gerkema, T.; Nauw, J.J.; van der Hout, C.M. (2014). Measurements on the transport of suspended particulate matter in the Vlie Inlet. *Geol. Mijnb. 93(3)*: 95-105. dx.doi.org/10.1017/njg.2014.7

Gerringa, L.J.A.; Rijkenberg, M.J.A.; Thuróczy, C.-E.; Maas, L.R.M. (2014). A critical look at the calculation of the binding characteristics and concentration of iron complexing ligands in seawater with suggested improvements. *Environ. Chem. 11(2)*: 114-136. dx.doi.org/10.1071/EN13072

Gill, R.E.; Douglas, D.C.; Handel, C.M.; Tibbitts, T.L.; Hufford, G.; Piersma, T. (2014). Hemispheric-scale wind selection facilitates bar-tailed godwit circum-migration of the Pacific. *Anim. Behav. 90*: 117-130. dx.doi.org/10.1016/j.anbehav.2014.01.020

Gillis, L.G.; Bouma, T.J.; Kiswara, W.; Ziegler, A.D.; Herman, P.M.J. (2014). Leaf transport in mimic mangrove forests and seagrass beds. *Mar. Ecol. Prog. Ser. 498*: 95-102. dx.doi.org/10.3354/meps10615

Gillis, L.G.; Bouma, T.J.; Jones, C.G.; van Katwijk, M.M.; Nagelkerken, I.; Jeuken, C.J.L.; Herman, P.; Ziegler, A.D. (2014). Potential for landscape-scale positive interactions among tropical marine ecosystems. *Mar. Ecol. Prog. Ser. 503*: 289-303. dx.doi.org/10.3354/meps10716 [OA gold]

Gillis, L.G.; Ziegler, A.D.; van Oevelen, D.; Cathalot, C.; Herman, P.; Wolters, J.W.; Bouma , T.J. (2014). Tiny Is Mighty: Seagrass Beds Have a Large Role in the Export of Organic Material in the Tropical Coastal Zone. *PLoS One 9(11)*: e111847. dx.doi.org/10.1371/journal.pone.0111847 [OA gold]

Giusberti, L.; Bannikov, A.; Galazzo, F.B.; Fornaciari, E.; Frieling, J.; Luciani, V.; Papazzoni, C.A.; Roghi, G.; Schouten, S.; Sluijs, A.; Bosellini, F.R.; Zorzin, R. (2014). A new *Fossil-Lagerstätte* from the Lower Eocene of Lessini Mountains (northern Italy): A multidisciplinary approach. *Palaeogeogr. Palaeoclimatol. Palaeoecol. 403*: 1-15. dx.doi.org/10.1016/j.palaeo.2014.03.012

González-Ortis, V.; Egea, L.G.; Jiménez-Ramos, R.; Moreno-Marín, F.; Pérez-Llorens, J.L.; Bouma , T.J.; Brun, F.G. (2014). Interactions between Seagrass Complexity, Hydrodynamic Flow and Biomixing Alter Food Availability for Associated Filter-Feeding Organisms. *PLoS One 9(8)*: e1949 pp 1-14. hdl.handle.net/10.1371/journal.pone.0104949 [OA gold]

Goudeau, M.-L.S.; Grauel, A.-L.; Tessarolo, C.; Leider, A.; Chen, L.; Bernasconi, S.M.; Versteegh, G.J.M.; Zonneveld, K.A.F.; Boer, W.; Alonso-Hernandez, C.M.; De Lange, G.J. (2014). The Glacial-Interglacial transition and Holocene environmental changes in sediments from the Gulf of Taranto, central Mediterranean. *Mar. Geol. 348*: 88-102. dx.doi.org/10.1016/j.margeo.2013.12.003

Govers, L.; Lamers, L.P.M.; Bouma, T.; Eygensteyn, J.; de Brouwer, J.H.F.; Hendriks, A.J.; Huijbers, C.; van Katwijk, M.M. (2014). Seagrasses as indicators for coastal trace metal pollution: A global meta-analysis serving as a benchmark, and a Caribbean case study. *Environ. Pollut. 195*: 210-217. dx.doi.org/10.1016/j.envpol.2014.08.028

Govers, L.L.; Lamers, L.P.M.; Bouma, T.J.; de Brouwer, J.H.F.; van Katwijk, M.M. (2014). Eutrophication threatens Caribbean seagrasses – An example from Curaçao and Bonaire. *Mar. Pollut. Bull. 89(1-2)*: 481–486. dx.doi.org/10.1016/j.marpolbul.2014.09.003

Govers, L.L.; Pieck, T.; Bouma, T.J.; Suykerbuyk, W.; Smolders, A.J.P.; van Katwijk, M.M. (2014). Seagrasses are negatively affected by organic matter loading and *Arenicola marina* activity in a laboratory experiment. *Oecologia 175(2)*: 677-685. dx.doi.org/10.1007/s00442-014-2916-8

Govers, L.L.; de Brouwer, J.H.F.; Suykerbuyk, W.; Bouma, T.J.; Lamers, L.P.M.; Smolders, A.J.P.; van Katwijk, M.M. (2014). Toxic effects of increased sediment nutrient and organic matter loading on the seagrass *Zostera noltii*. *Aquat. Toxicol. 155*: 253–260. dx.doi.org/10.1016/j.aquatox.2014.07.005

Gros, J.; Nabi, D.; Wu¨rz, B.; Wick, L.Y.; Brussaard, C.P.D.; Huisman , J.; van der Meer, J.R.; Reddy, C.M.; Arey, J.S. (2014). First Day of an Oil Spill on the Open Sea: Early Mass Transfers of Hydrocarbons to Air and Water. *Environ. Sci. Technol. 48*: 9400-9411. hdl.handle.net/10.1021/es502437e

Grothe, A.; Sangiorgi, F; Mulders, Y.; Vasiliev, I.; Brinkhuis, H.; Stoica, M.; Krijgsman, W.; Reichart, G.-J. (2014). Black Sea desiccation during the Messinian Salinity Crisis: Fact or fiction? *Geology (Boulder Colo.) 42(7)*: 563-566. hdl.handle.net/10.1130/G35503.1

Guerreiro, C.; Sá, C.; de Stigter, H.; Oliveira, A.; Cachão, M.; Cros, L.; Borges, C.; Quaresma, L.; Santos, A.I.; Fortuño, J.-M.; Rodrigez, A. (2014). Influence of the Nazaré Canyon, central Portuguese margin, on late winter coccolithophore assemblages. *Deep-Sea Res., Part 2, Top. Stud. Oceanogr. 104*: 335-358. hdl.handle.net/10.1016/j.dsr2.2013.09.011

Günther, F.; Thiele, A.; Gleixner, G.; Xu, B.Q.; Yao, T.; Schouten, S. (2014). Distribution of bacterial and archaeal ether lipids in soils and surface sediments of Tibetan lakes: Implications for GDGT-based proxies in saline high mountain lakes. *Org. Geochem. 67*: 19-30. dx.doi.org/10.1016/j.orggeochem.2013.11.014

Gutiérrez, J.S. (2014). Living in Environments with Contrasting Salinities: A Review of Physiological and Behavioural Responses in Waterbirds. *Ardeola 61(2)*: 233-256. dx.doi.org/10.13157/arla.61.2.2014.233

Haan, J. den; Visser, P.M.; Ganase, A.E.; Gooren, E.E.; Stal, L.J.; van Duyl, F.C.; Vermeij, M.J.A.; Huisman, J. (2014). Nitrogen fixation rates in algal turf communities of a degraded versus less degraded coral reef. *Coral Reefs 33(4)*: 1003-1015. dx.doi.org/10.1007/s00338-014-1207-5

Haig, J.; Nott, J.; Reichart, G.-J. (2014). Australian tropical cyclone activity lower than at any time over the past 550-1,500 years. *Nature (Lond.) 505(7485)*: 667–671. dx.doi.org/10.1038/nature12882

Halo, I.; Backeberg, B.; Penven, P.; Ansorge, I.; Reason, C.; Ullgren, J.E. (2014). Eddy properties in the Mozambique Channel: A comparison between observations and two numerical ocean circulation models. *Deep-Sea Res., Part 2, Top. Stud. Oceanogr. 100*: 38-53. dx.doi.org/10.1016/j.dsr2.2013.10.015

Haren, H. van; Gostiaux, L.; Morozov, E.G.; Tarakanov, R.I. (2014). Extremely long Kelvin-Helmholtz billow trains in the Romanche Fracture Zone. *Geophys. Res. Lett. 41(2)*: 8445–8451. dx.doi.org/10.1002/2014GL062421 [OA green]

Haren, H. van; Mienis, F; Duineveld, G.C.A.; Lavaleye, M.S.S. (2014). High-resolution temperature observations of a trapped nonlinear diurnal tide influencing cold-water corals on the Logachev mounds. *Prog. Oceanogr. 125*: 16-25. hdl.handle.net/10.1016/j.pocean.2014.04.021

Haren, H. van; ANTARES Collaboration (2014). High-frequency internal wave motions at the ANTARES site in the deep Western Mediterranean. *Ocean Dynamics 64(4)*: 507-517. dx.doi.org/10.1007/s10236-014-0702-0

Haren, H. van; Gostiaux, L. (2014). Characterizing turbulent overturns in CTD-data. *Dyn. Atmos. Oceans 66*: 58-76. hdl.handle.net/10.1016/j.dynatmoce.2014.02.001

Haren, H. van (2014). Internal wave - zooplankton interactions in the Alboran Sea (W-Mediterranean). *J. Plankton Res. 36(4)*: 1124-1134. hdl.handle.net/10.1093/plankt/fbu031

Harman, C.; Booij, K. (2014). Letter to the Editor Concerning the Viewpoint; "Recognizing the Limitations of Performance Reference Compound (PRC)-Calibration Technique in Passive Water Sampling". *Environ. Sci. Technol. 48(1)*: 3. dx.doi.org/10.1021/es405153c [OA gold]

Hawkes, J.A.; Connelly, D.P.; Rijkenberg, M.J.A.; Achterberg, E.P. (2014). The importance of shallow hydrothermal island arc systems in ocean biogeochemistry. *Geophys. Res. Lett. 41(3)*: 942-947. dx.doi.org/10.1002/2013GL058817 [OA green]

Heide, T. van der; Tielens, E.; van der Zee, E.M.; Weerman, E.J.; Holthuijsen, S.; Eriksson, B.K.; Piersma, T.; van de Koppel, J.; Olff, H. (2014). Predation and habitat modification synergistically interact to control bivalve recruitment on intertidal mudflats. *Biol. Conserv. 172*: 163-169. dx.doi.org/10.1016/j.biocon.2014.02.036

Heinzelmann, S.M.; Bale, N.J.; Hopmans, E.C.; Sinninghe Damsté, J.S.; Schouten, S.; van der Meer, M.T.J. (2014). Critical assessment of glyco- and phospholipid separation by using silica chromatography. *Appl. Environ. Microbiol. 80(1)*: 360-365. dx.doi.org/10.1128/AEM.02817-13 [OA green]

Helmond van, N.A.G.M.; Sluijs, A.; Reichart, G.J; Sinninghe Damsté, J.S.; Slomp, C.P.; Brinkhuis, H. (2014). A perturbed hydrological cycle during Oceanic Anoxic Event 2. *Geology (Boulder Colo.) 42(2)*: 123-126. dx.doi.org/10.1130/G34929.1

Heuven, S.M.A.C. van; Hoppema, M.; Jones, E.M.; de Baar, H.J.W. (2014). Rapid invasion of anthropogenic CO_2 into the deep circulation of the Weddell Gyre. *Philos. Trans. R. Soc. Lond., A 372(2019)*: 20130056. hdl.handle.net/10.1098/rsta.2013.0056 [OA green]

Hooijmeijer, J.C.E.W.; Gill, R.E.; Mulcahy, D.M.; Tibbitts, T.L.; Kentie, R.; Gerritsen, G.J.; Bruinzeel, L.W.; Tijssen, D.C.; Harwood, C.M.; Piersma, T. (2014). Abdominally implanted satellite transmitters affect reproduction and survival rather than migration of large shorebirds. *Journ. Ornithol. 155*: 447-457. hdl.handle.net/10.1007/s10336-013-1026-4

Hout, P.J. van den; van Gils, J.A.; Robin, F.; van der Geest, M.; Dekinga, A.; Piersma, T. (2014). Interference from adults forces young red knots to forage for longer and in dangerous places. *Anim. Behav. 88*: 137-146. dx.doi.org/10.1016/j.anbehav.2013.11.020

Huiskes, A.H.L.; Gremmen, N.J.M.; Bergstrom, D.M.; Frenot, Y.; Hughes, K.A.; Imura, S.; Kiefer, K.; Lebouvier, M.; Lee, J.E.; Tsujimoto, M.; Ware, C.; Van de Vijver, B.; Chown, S.L. (2014). Aliens in Antarctica: Assessing transfer of plant propagules by human visitors to reduce invasion risk. *Biol. Conserv. 171*: 278-284. dx.doi.org/10.1016/j.biocon.2014.01.038 [OA gold]

Hulten, M.M.P. van; Sterl, A.; Middag, R.; de Baar, H.J.W.; Gehlen, M.; Dutay, J.-C.; Tagliabue, A. (2014). On the effects of circulation, sediment resuspension and biological incorporation by diatoms in an ocean model of aluminium. *Biogeosciences 11*: 3757-3779. hdl.handle.net/10.1126/science.1254070 [OA gold]

Hummel, H.; Wijnhoven, S. (2014). Long-term patterns in the establishment, expansion and decline of invading macrozoobenthic species in the brackish and marine waters of Southwest Netherlands. *Mar. Ecol. (Berl.) 35(suppl. 1)*: 50-55. hdl.handle.net/10.1111/maec.12085 [OA gold]

Ihnken, S.; Beardall, J.; Kromkamp, J.C.; Gómez Serrano, C.; Torres, M.A.; Masojídek, J.; Malpartida, I.; Abdala, R.; Gil Jerez, C.; Malapascua, J.R.; Navarro, E.; Rico, R.M.; Peralta, E.; Ferreira Ezequil, J.P.; Lopez Figueroa, F (2014). Light acclimation and pH perturbations affect photosynthetic performance in *Chlorella* mass culture. *Aquat. Biol. 22*: 95-110. hdl.handle.net/10.3354/ab00586 [OA gold]

Ihnken, S.; Kromkamp, J.C.; Beardall, J.; Silsbe, G.M. (2014). State-transitions facilitate robust quantum yields and cause an over-estimation of electron transport in *Dunaliella tertiolecta* cells held at the CO_2 compensation point and re-supplied with DIC. *Photosynth. Res. 119(3)*: 257-272. dx.doi.org/10.1007/s11120-013-9937-8

Jager, M. de; Bartumeus, F.; Kölzsch, A.; Weissing, F.J.; Hengeveld, G.M.; Nolet, B.A.; Herman, P.M.J.; de Koppel, J. (2014). How superdiffusion gets arrested: ecological encounters explain shift from Levy to Brownian movement. *Proc. - Royal Soc., Biol. Sci. 281(1774)*: 20132605. dx.doi.org/10.1098/rspb.2013.2605 [OA gold]

Jonge, C. de; Stadnitskaia, A.; Hopmans, E.C.; Cherkashov, G.; Fedotov, A.; Sinninghe Damsté, J. (2014). In situ produced branched glycerol dialkyl glycerol tetraethers in suspended particulate matter from the Yenisei River, Eastern Siberia. *Geochim. Cosmochim. Acta 125*: 476-491. dx.doi.org/10.1016/j.gca.2013.10.031 [OA gold]

Jonge, C. de; Hopmans, E.C.; Zell, C.; Kim, J.H.; Schouten, S.; Sinninghe Damsté, J.S. (2014). Occurrence and abundance of 6-methyl branched glycerol dialkyl glycerol tetraethers in soils: Implications for palaeoclimate reconstruction. *Geochim. Cosmochim. Acta 141*: 97–112. dx.doi.org/10.1016/j.gca.2014.06.013

Jung, M.Y.; Park, S.J.; Kim, S.J.; Kim, J.G.; Sinninghe Damsté, J.S.; Jeon, C.O.; Rhee, S.K. (2014). A Mesophilic, Autotrophic, Ammonia-oxidizing archaeon of Thaumarchaeal Group I.1a Cultivated from a deep oligotrophic soil horizon. *Appl. Environ. Microbiol. 80(12)*: 3645-3655. dx.doi.org/10.1128/AEM.03730-13

Just, J.; Schefuß, E.; Kuhlmann, H.; Stuut, J.B.W.; Pätzold, J. (2014). Climate induced sub-basin source-area shifts of Zambezi River sediments over the past 17 ka. *Palaeogeogr. Palaeoclimatol. Palaeoecol. 410*: 190-199. hdl.handle.net/10.1016/j.palaeo.2014.05.045

Kaserzon, S.L.; Hawker, D.W.; Kennedy, K.; Bartkow, M.; Carter, S.; Booij, K.; Mueller, J.F. (2014). Characterisation and comparison of the uptake of ionizable and polar pesticides, pharmaceuticals and personal care products by POCIS and Chemcatchers. *Environ. Sci. Process. Impacts 11*: 2517–2526. dx.doi.org/10.1039/c4em00392f

Kaserzon, S.L.; Hawker, D.W.; Booij, K.; O'Brien, D.S.; Kennedy, K.; Vermeirssen, E.L.M.; Mueller, J.F. (2014). Passive sampling of perfluorinated chemicals in water: In-situ calibration. *Environ. Pollut. 186*: 98-103. dx.doi.org/10.1016/j.envpol.2013.11.030

Kasper, S.; van der Meer, M.T.J.; Mets, A.; Zahn, R.; Sinninghe Damsté, J.S.; Schouten, S. (2014). Salinity changes in the Agulhas leakage area recorded by stable hydrogen isotopes of C_{37} alkenones during Termination I and II. *Clim. Past 10(1)*: 251-260. dx.doi.org/10.5194/cp-10-251-2014 [OA gold]

Kentie, R.; Both, C.; Hooijmeijer, J.W.E.W.; Piersma, T. (2014). Age-dependent dispersal and habitat choice in black-tailed godwits *Limosa limosa Limosa* across a mosaic of traditional and modern grassland habitatsgrassland habitats. *J. Avian Biol. 45*: 396-405. hdl.handle.net/10.1111/jav.00273

Kim, J.-H.; Buscail, R.; Fanget, A.-S.; Eyrolle-Boyer, F.; Bassetti, M.-A.; Dorhout, D.; Baas, M.; Berné, S.; Sinninghe Damsté, J.S. (2014). Impact of river channel shifts on tetraether lipids in the Rhône prodelta (NW Mediterranean): Implication for the BIT index as an indicator of palaeoflood events. *Org. Geochem. 75*: 99-108. dx.doi.org/10.1016/j.orggeochem.2014.06.011 [OA green]

Klunder, M.B.; Laan, P.; de Baar, H.J.W.; Middag, R.; Neven, I.; Van Ooijen, J. (2014). Dissolved Fe across the Weddell Sea and Drake Passage: impact of DFe on nutrient uptake. *Biogeosciences 11(3)*: 651-669. dx.doi.org/10.5194/bg-11-651-2014 [OA gold]

Kluijver, A. de; Schoon, P.L.; Downing, J.A.; Schouten, S.; Middelburg, J.J. (2014). Stable carbon isotope biogeochemistry of lakes along a trophic gradient. *Biogeosciences 11*: 6265– 6276. dx.doi.org/10.5194/bg-11-6265-2014 [OA gold]

Koch, W.; Boer, P.; Witte, J.IJ.; van der Veer, H.W.; Thieltges, D.W. (2014). Inventory and comparison of abundance of parasitic copepods on fish hosts in the western Wadden Sea (North Sea) between 1968 and 2010. *J. Mar. Biol. Ass. U.K. 94(3)*: 547-555. dx.doi.org/10.1017/S0025315413001677

Kool, D.M.; Talbot, H.M.; Rush, D.; Ettwig, K.; Sinninghe Damsté, J.S. (2014). Rare bacteriohopanepolyols as markers for an autotrophic, intra-aerobic methanotroph. *Geochim. Cosmochim. Acta 136*: 114-125. dx.doi.org/10.1016/j.gca.2014.04.002 [OA green]

Kraft, B.; Tegetmeyer, H.E.; Sharma, R.; Klotz, M.G.; Ferdelman, T. G.; Hettich, R.L.; Geelhoed, J.S.; Strous, M. (2014). The environmental controls that govern the end product of bacterial nitrate respiration. *Science (Wash.) 345(6197)*: 676-679. hdl.handle.net/10.1126/science.1254070

Kulichevskaya, I.S.; Suzina, N.E.; Rijpstra, W.I.C.; Sinninghe Damsté, J.S.; Dedysh, S.N. (2014). *Paludibaculum fermentans* gen. nov., sp. nov., a facultative anaerobe capable of dissimilatory iron reduction from subdivision 3 *Acidobacteria*. *Int. J. Syst. Evol. Microbiol. 64*: 2857-2864. hdl.handle.net/10.1099/ijs.0.066175-0

Kunihiro, T.; Veuger, B.; Vasquez-Cardenas, D.; Pozzato, L.; Le Guitton, M.; Moriya, K.; Kuwae, M.; Omori, K.; Boschker, H.T.S.; van Oevelen, D. (2014). Phospholipid-Derived Fatty Acids and Quinones as Markers for Bacterial Biomass and Community Structure in Marine Sediments. *PLoS One 9(4)*: e96219. dx.doi.org/10.1371/journal.pone.0096219 [OA gold]

La Nafie, Y.A.; Van Engeland, T.; van Katwijk, M.M.; Bouma, T.J. (2014). Uptake of nitrogen from compound pools by the seagrass *Zostera noltii*. *J. Exp. Mar. Biol. Ecol. 460*: 47-52. hdl.handle.net/10.1016/j.jembe.2014.06.007

Lamborg, C.H.; Hammerschmidt, C.R.; Bowman, K.L.; Swarr, G.J.; Munson, K.M.; Ohnemus, D.C.; Lam, P.L.; Heimbürger, L.-E.; Rijkenberg, M.J.A.; Saito, M.A. (2014). A global ocean inventory of anthropogenic mercury based on water column measurements. *Nature (Lond.) 512(7512)*: 65-68. hdl.handle.net/10.1038/nature13563

Land, C. van der; Eisele, M.; Mienis, F; de Haas, H.; Hebbeln, D.; Reijmer, J.J.G.; van Weering, T.C.E. (2014). Carbonate mound development in contrasting settings on the Irish margin. *Deep-Sea Res., Part 2, Top. Stud. Oceanogr. 99*: 297-306. dx.doi.org/10.1016/j.dsr2.2013.10.004

Lengger, S.K.; Hopmans, E.C.; Sinninghe Damsté, J.S.; Schouten, S. (2014). Fossilization and degradation of archaeal intact polar tetraether lipids in deeply buried marine sediments (Peru Margin). *Geobiol. 12(3)*: 212-220. dx.doi.org/10.1111/gbi.12081 [OA green]

Lengger, S.K.; Hopmans, E.C.; Sinninghe Damsté, J.S.; Schouten, S. (2014). Impact of sedimentary degradation and deep water column production on GDGT abundance and distribution in surface sediments in the Arabian Sea: Implicationsfor the TEX_{86} paleothermometer. *Geochim. Cosmochim. Acta 142*: 386-399. hdl.handle.net/10.1016/j.gca.2014.07.013 [OA green]

Lengger, S.K.; Lipsewers, Y.A.; de Haas, H.; Sinninghe Damsté, J.S.; Schouten, S. (2014). Lack of ^{13}C-label incorporation suggests low turnover rates of thaumarchaeal intact polar tetraether lipids in sediments from the Iceland shelf. *Biogeosciences 11(2)*: 201-216. dx.doi.org/10.5194/bg-11-201-2014 [OA gold]

Leote, C.; Mulder, L.; Epping, E. (2014). A budget of bioavailable inorganic phosphorus in the sediment for the western Wadden Sea. *J. Sea Res. 87*: 79-90. dx.doi.org/10.1016/j.seares.2013.12.009

Lipsewers, Y.A.; Bale, N.J.; Hopmans, E.C.; Schouten, S.; Sinninghe Damsté, J.S.; Villanueva, L. (2014). Seasonality and depth distribution of the abundance and activity of ammonia oxidizing microorganisms in marine coastal sediments (North Sea). *Front. Microbiol. 5*: 471 1-12. hdl.handle.net/doi: 10.3389/fmicb.2014.00472 [OA gold]

Liu, Q.X.; Weerman, E.J.; Gupta, R.; Herman, P.M.J.; Olff, H.; van de Koppel, J. (2014). Biogenic gradients in algal density affect the emergent properties of spatially self-organized mussel beds. *J. R. Soc. Interface 11(96)*: 20140089. dx.doi.org/10.1098/rsif.2014.0089

Liu, Q.X.; Herman, P.M.J.; Mooij, W.M.; Huisman, J.; Scheffer, M.; Olff, H.; de Koppel, J. (2014). Pattern formation at multiple spatial scales drives the resilience of mussel bed ecosystems. *Nature Comm. 5*: 5234. hdl.handle.net/10.1038/ncomms6234 [OA gold]

Lok, T.; Overdijk, O.; Piersma, T. (2014). Interpreting variation in growth of Eurasian Spoonbill chicks: disentangling the effects of age, sex and environment. *Ardea 102(2)*: 181-194. dx.doi.org/10.5253/arde.v102i2.a8

Loke, L.H.L.; Jachowski, N.R.; Bouma, T.J.; Ladle, R.J.; Todd, P.A. (2014). Complexity for Artificial Substrates (*CASU*): Software for Creating and Visualising Habitat Complexity. *PLoS One 9(2)*: e87990. dx.doi.org/10.1371/journal.pone.0087990 [OA gold]

Loomis, S.E.; Russell, J.M.; Eggermont, H.; Verschuren, D.; Sinninghe Damsté, J.S. (2014). Effects of temperature, pH and nutrient concentration on branched GDGT distributions in East African lakes: Implications for paleoenvironmental reconstruction. *Org. Geochem. 66*: 25-37. dx.doi.org/10.1016/j.orggeochem.2013.10.012

Loomis, S.E.; Russell, J.M.; Heureux, A.M.; D'Andrea, W.J.; Sinninghe Damsté, J.S. (2014). Seasonal variability of branched glycerol dialkyl glycerol tetraethers (brGDGTs) in a temperate lake system. *Geochim. Cosmochim. Acta 144*: 173–187. dx.doi.org/10.1016/j.gca.2014.08.027

López-Rodríguez, C.; Stadnitskaia, A.; De Lange, G.J.; Martínez-Ruíz, F; Comas, M.; Sinninghe Damsté, J.S. (2014). Origin of lipid biomarkers in mud volcanoes from the Alboran Sea, western Mediterranean. *Biogeosciences 11*: 3187-3204. hdl.handle.net/10.5194/bg-11-3187-2014 [OA gold]

Louterbach, M.; Roddaz, M.; Bailleul, J.; Antoine, P.O.; Adnet, S.; Kim, J.H.; van Soelen, E.E.; Parra, F.; Gérard, J.; Calderon, Y.; Gagnaison, C.; Sinninghe Damsté, J.S.; Baby, P. (2014). Evidences for a Paleocene marine incursion in southern Amazonia (Madre de Dios Sub-Andean Zone, Peru). *Palaeogeogr. Palaeoclimatol. Palaeoecol. 414*: 451–471. dx.doi.org/10.1016/j.palaeo.2014.09.027

Lubbe, J.L. van der; Tjallingii, R.; Prins, M.A.; Brummer, G.-J.A.; Jung, S.J.H.; Kroon, D.; Schneider, R.R. (2014). Sedimentation patterns off the Zambezi River over the last 20,000 years. *Mar. Geol. 355*: 189–201. dx.doi.org/10.1016/j.margeo.2014.05.012

Ly, J.; Philippart, C.J.M.; Kromkamp, J.C. (2014). Phosphorus limitation during a phytoplankton spring bloom in the western Dutch Wadden Sea. *J. Sea Res. 88*: 109-120. dx.doi.org/10.1016/j.seares.2013.12.010 [OA gold]

Ma, Z.; Ysebaert, T.; van der Wal, D.; de Jong, D.J.; Li, X; Herman, P.M.J. (2014). Long-term salt marsh vertical accretion in a tidal bay with reduced sediment supply. *Est., Coast. and Shelf Sci. 146*: 14-23. hdl.handle.net/10.1016/j.ecss.2014.05.001

Ma, Z.; Melville, D.S.; Liu, J.; Chen, Y.; Yang, H.; Ren, W.; Zhang, Z.; Piersma, T.; Li, B. (2014). Rethinking China's new great wall : Massive seawall construction in coastal wetlands threatens biodiversity. *Science (Wash.) 346(6212)*: 912-914. hdl.handle.net/10.1126/science.1257258

Maat, D.S.; Bale, N.J.; Hopmans, E.C.; Baudoux, A.C.; Sinninghe Damsté, J.S.; Schouten, S.; Brussaard, C.P.D. (2014). Acquisition of intact polar lipids from the prymnesiophyte *Phaeocystis globosa* by its lytic virus PgV-07T. *Biogeosciences 11(1)*: 185-194. dx.doi.org/10.5194/bg-11-185-2014 [OA gold]

Maat, D.S.; Crawfurd, K.J.; Timmermans, K.R.; Brussaard, C.P.D. (2014). Elevated CO_2 and Phosphate Limitation Favor Micromonas pusilla through Stimulated Growth and Reduced Viral Impact. *Appl. Environ. Microbiol. 80(10)*: 3119-3127. dx.doi.org/10.1128/AEM.03639-13

Malkin, S.Y.; Rao, A.M.F.; Seitaj, D.; Vasquez-Cardenas, D.; Zetsche, E.-M.; Hidalgo-Martinez, S.; Boschker, H.T.S.; Meysman, F.J.R. (2014). Natural occurrence of microbial sulphur oxidation by long-range electron transport in the seafloor. *ISME J. 8(9)*: 1843–1854. hdl.handle.net/10.1038/ismej.2014.41 [OA gold]

Mao, J.; Nierop, K.G.J.; Sinninghe Damsté, J.S.; Dekker, S.C. (2014). Roots induce stronger soil water repellency than leaf waxes. *Geoderma 232-234*: 328-340. hdl.handle.net/10.1016/j.geoderma.2014.05.024

Marion, A.; Nikora, V.; Puijalon, S.; Bouma, T.J.; Koll, K.; Ballio, F.; Tait, S.; Zaramella, M.; Sukhodolov, A.; O'Hare, M.; Wharton, G.; Aberle, J.; Tregnaghi, M.; Davies, P.; Nepf, H.; Parker, G.; Statzner, B. (2014). Aquatic interfaces: a hydrodynamic and ecological perspective. *J. Hydraul. Res. 52(6)*: 744-758. dx.doi.org/10.1080/00221686.2014.968887

Márquez-Ferrando, R.; Figuerola, J.; Hooijmeijer, J.C.E.W.; Piersma, T. (2014). Recently created man-made habitats in Doñana provide alternative wintering space for the threatened Continental European black-tailed godwit population. *Biol. Conserv. 171*: 127-135. dx.doi.org/10.1016/j.biocon.2014.01.022

Matthews, B.; De Meester, L.; Jones, C.G.; Ibelings, B.W.; Bouma, T.J.; Nuutinen, V.; van de Koppel, J.; Odling-Smee, J. (2014). Under niche construction: an operational bridge between ecology, evolution, and ecosystem science. *Ecol. Monogr. 84(2)*: 245-263. dx.doi.org/10.1890/13-0953.1 [OA green]

M'boule, D.; Chivall, D.; Sinke-Schoen, D.; Sinninghe Damsté, J.S.; Schouten, S.; van der Meer, M.T.J. (2014). Salinity dependent hydrogen isotope fractionation in alkenones produced by coastal and open ocean haptophyte algae. *Geochim. Cosmochim. Acta 130*: 126-135. dx.doi.org/10.1016/j.gca.2014.01.029 [OA green]

Mewes, A.; Langer, G.; de Nooijer, L.J.; Bijma, J.; Reichart, G.J. (2014). Effect of different seawater Mg $^{2+}$ concentrations on calcification in two benthic foraminifers. *Mar. Micropaleontol. 113*: 56-64. dx.doi.org/10.1016/j.marmicro.2014.09.003

Meer, J. van der; Klok, C.; Kearney, M.R.; Wijsman, J.W.M.; Kooijman, S.A.L.M. (2014). 35 years of DEB research. *J. Sea Res. 94*: 1-4. dx.doi.org/10.1016/j.seares.2014.09.004

Meer, J. van der; Kooijman, S.A.L.M. (2014). Inference on energetics of deep-sea fish that cannot be aged: The case of the hagfish. *J. Sea Res. 94*: 138–143. dx.doi.org/10.1016/j.seares.2014.07.007

Meysman, F.J.R. (2014). Biogeochemistry: Oxygen burrowed away. *Nature Geoscience 7*: 620-621. dx.doi.org/10.1038/ngeo2218 [OA green]

Mienis, F.; Duineveld, G.C.A.; Davis, A.J.; Lavaleye, M.M.S.; Rosso, S.W.; Seim, H.; Bane, J.; van Haren, H.; Bergman, M.J.N.; de Haas, H.; Brooke, S.; van Weering, T.C.E. (2014). Cold-water coral growth under extreme environmental conditions, the Cape Lookout area, NW Atlantic. *Biogeosciences 11*: 2543-2560. hdl.handle.net/doi:10.5194/bg-11-2543-2014 [OA gold]

Milot, E.; Cohen, A.A.; Vézina, F.; Buehler, D.M.; Matson, K.D.; Piersma, T. (2014). A novel integrative method for measuring body condition in ecological studies based on physiological dysregulation. *Methods Ecol. Evol. 5(2)*: 146-155. hdl.handle.net/10.1111/2041-210X.12145

Miyatake, T.; Moerdijk-Poortvliet, T.C.W.; Stal, L.J.; Boschker, H.T.S. (2014). Tracing carbon flow from microphytobenthos to major bacterial groups in an intertidal marine sediment by using an in situ ^{13}C pulse-chase method. *Limnol. Oceanogr. 59(4)*: 1275-1287. hdl.handle.net/10.4319/lo.2014.59.4.1275 [OA green]

Moerdijk-Poortvliet, T.C.W.; Brasser, J.; de Ruiter, G.; Houtekamer, M.; Bolhuis, H.; Stal, L.J.; Boschker, H.T.S. (2014). A versatile method for simultaneous stable carbon isotope analysis of DNA and RNA nucleotides by liquid chromatography/isotope ratio mass spectrometry. *Rapid Comm. Mass Spectrom. 28(12)*: 1401-1411. dx.doi.org/10.1002/rcm.6919

Moerdijk-Poortvliet, T.C.W.; Stal, L.J.; Boschker, H.T.S. (2014). LC/IRMS analysis: A powerful technique to trace carbon flow in microphytobenthic communities in intertidal sediments. *J. Sea Res. 92*: 19–25. dx.doi.org/10.1016/j.seares.2013.10.002

Mohn, C.; Rengstorf, A.; White, M.; Mienis, F.; Soetaert, K.; Grehan, A.; Duineveld, G. (2014). Linking benthic hydrodynamics and cold-water coral occurrences: A high-resolution model study at three cold-water coral provinces in the NE Atlantic. *Prog. Oceanogr. 122*: 92-104. dx.doi.org/10.1016/j.pocean.2013.12.003

Mojica, K.D.A.; Evans, C.; Brussaard, C.P.D. (2014). Flow cytometric enumeration of marine viral populations at low abundances. *Aquat. Microb. Ecol. 71(3)*: 203-209. dx.doi.org/10.3354/ame01672

Mojica, K.D.A.; Brussaard, C.P.D. (2014). Factors affecting virus dynamics and microbial host–virus interactions in marine environments. *FEMS Microbiol. Ecol. 89(3)*: 495–515. hdl.handle.net/10.1111/1574-6941.12343

Möller, I.; Kudella, M.; Rupprecht, F.; Spencer, T.; Paul, M.; van Wesenbeeck, B.K.; Wolters, G.; Jensen, K.; Bouma, T.J.; Miranda-Lange, M.; Schimmels, S. (2014). Wave attenuation over coastal salt marshes under storm surge conditions. *Nature Geoscience 7(10)*: 727-731. hdl.handle.net/10.1038/ngeo2251

Moneta, A.; Veuger, B.; van Rijswijk, P.; Meysman, F; Soetaert, K.; Middelburg, J.J. (2014). Dissolved inorganic and organic nitrogen uptake in the coastal North Sea: A seasonal study. *Est., Coast. and Shelf Sci. 147*: 78-86. hdl.handle.net/10.1016/j.ecss.2014.05.022

Mooij, W.M.; Brederveld, R.J.; de Klein, J.J.M.; Deangelis, D.L.; Downing, A.S.; Faber, M.J.; Gerla, D.J.; Hipsey, M.R.; 't Hoen, J.; Janse, J.H.; Janssen, A.B.G.; Jeuken, M.; Kooi, B.W.; Lischke, B.; Petzoldt, T.; Postma, L.; Schep, S.A.; Scholten, H.; Teurlincx, S.; Thiange, C.; Trolle, D.; van Dam, A.A.; van Gerven, L.P.A.; van Nes, E.H.; Kuipers, J. (2014). Serving many at once: How a database approach can create unity in dynamical ecosystem modelling. *Environ. Model. Softw. 61*: 266–273. dx.doi.org/10.1016/j.envsoft.2014.04.004 [OA gold]

Moreira, I.S.; Moreira-Turcq, P.; Kim, J.H.; Turcq, B.; Cordeiro, R.C.; Caquineau, S.; Mandengo-Yogo, M.; Sinninghe Damsté, J.S. (2014). A mineralogical and organic geochemical overview of the effects of Holocene changes in Amazon River flow on three floodplain lakes. *Palaeogeogr. Palaeoclimatol. Palaeoecol. 415*: 152–164. dx.doi.org/10.1016/j.palaeo.2014.03.017 [OA green]

Muck, S.; Griessler, T.; Köstner, N.; Klimiuk, A.; Winter, C.; Herndl, G.J. (2014). Fracture zones in the Mid Atlantic Ridge lead to alterations in prokaryotic and viral parameters in deep-water masses. *Front. Microbiol. 5*: 264. hdl.handle.net/ 10.3389/fmicb.2014.00264 [OA gold]

Mueller, B.; van der Zande, R.M.; van Leent, P.J.M.; Meesters, E.H.; Vermeij, M.J.A.; van Duyl, F.C. (2014). Effect of light availability on dissolved organic carbon release by Caribbean reef algae and corals. *Bull. Mar. Sci. 90(3)*: 875-893. hdl.handle.net/10.5343/bms.2013.1062

Mueller, B.; de Goeij, J.M.; Vermeij, M.J.A.; Mulders, Y.; van der Ent, E.; Ribes, M.; van Duyl, F.C. (2014). Natural Diet of Coral-Excavating Sponges Consists Mainly of Dissolved Organic Carbon (DOC). *PLoS One 9(2)*: e90152. dx.doi.org/10.1371/journal.pone.0090152 [OA gold]

Mueller, C.E.; Larsson, A.I.; Veuger, B.; Middelburg, J.J.; van Oevelen, D. (2014). Opportunistic feeding on various organic food sources by the cold-water coral Lophelia pertusa. *Biogeosciences 11(1)*: 123-133. dx.doi.org/10.5194/bg-11-123-2014 [OA gold]

Mutterlose, J.; Bottini, C.; Schouten, S.; Sinninghe Damsté, J.S. (2014). High sea-surface temperatures during the early Aptian Oceanic Anoxic Event 1a in the Boreal Realm. *Geology (Boulder Colo.) 42(5)*: 439-442. hdl.handle.net/10.1130/G35394.1

Nauw, J.J.; Merckelbach, L.M.; Ridderinkhof, H.; van Aken, H.M. (2014). Long-term ferry-based observations of the suspended sediment fluxes through the Marsdiep inlet using acoustic Doppler current profilers. *J. Sea Res. 87*: 17-29. dx.doi.org/10.1016/j.seares.2013.11.013

Neukom, R.; Nash, D.J.; Endfield, G.H.; Grab, S.W; Grove, C.A.; Kelso, C.; Vogel, C.H.; Zinke, J. (2014). Multi-proxy summer and winter precipitation reconstruction for southern Africa over the last 200 years. *Clim. dyn. 42(9-10)*: 2713-2726. dx.doi.org/10.1007/s00382-013-1886-6

Neumann, S.; Wessels, H.J.C.T.; Rijpstra, W.I.C.; Sinninghe Damsté, J.S.; Kartal, B.; Jetten, M.S.M.; van Niftrik, L. (2014). Isolation and characterization of a prokaryotic cell organelle from the anammox bacterium *Kuenenia stuttgartiensis*. *Mol. Microbiol. 94(4)*: 794-802. dx.doi.org/10.1111/mmi.12816

Nooijer, L.J. de; Spero, H.J.; Erez, J.; Bijma, J.; Reichart, G.J. (2014). Biomineralization in perforate foraminifera. *Earth-Sci. Rev. 135*: 48-58. hdl.handle.net/10.1016/j.earscirev.2014.03.013 [OA green]

Nooijer, L.J. de; Hathorne, E.C.; Reichart, G.J.; Langer, G.; Bijma, J. (2014). Variability in calcitic Mg/Ca and Sr/Ca ratios in clones of the benthic foraminifer *Ammonia tepida*. *Mar. Micropaleontol. 107*: 32-43. dx.doi.org/10.1016/j.marmicro.2014.02.002 [OA green]

Novoa, S.; Wernand, M.R.; van der Woerd, H.J. (2014). The modern Forel-Ule scale: a 'do-it-yourself' colour comparator for water monitoring. *JEOS: RP 9*: 14025 1-10. hdl.handle.net/10.2971/jeos.2014.14025 [OA gold]

Ntiamoa-Baidu, Y.; Nuoh, A.A.; Reneerkens, J.; Piersma, T. (2014). Population increases in non-breeding Sanderlings in Ghana indicate site preference. *Ardea 102(2)*: 131-138. hdl.handle.net/10.5253/arde.v102i2.a3

Nunes, M.; Martinho, F.; Vernisseau, A.; Marchand, P.; Le Bizec, B.; van der Veer, H.W.; Cabral, H.N.; Ramos, F.; Pardal, M.A. (2014). Early contamination of European flounder (*Platichthys flesus*) by PCDD/Fs and dioxin-like PCBs in European waters. *Mar. Pollut. Bull. 85(1)*: 292–296. dx.doi.org/10.1016/j.marpolbul.2014.05.042

Ondiviela, B.; Losada, I.J.; Lara, J.L.; Maza, M.; Galván, C.; Bouma, T.J.; van Belzen, J. (2014). The role of seagrasses in coastal protection in a changing climate. *Coast. Eng. 87*: 158-168. dx.doi.org/10.1016/j.coastaleng.2013.11.005

Oudman, T.; Onrust, J.; de Fouw, J.; Spaans, B.; Piersma, T.; van Gils, J.A. (2014). Digestive Capacity and Toxicity Cause Mixed Diets in Red Knots That Maximize Energy Intake Rate. *American Naturalist 183(5)*: 650-659. dx.doi.org/10.1086/675759

Pascal, P.-Y.; Dubois, S.; Boschker, H.T.S.; Gros, O. (2014). Trophic role of large benthic sulfur bacteria in mangrove sediment. *Mar. Ecol. Prog. Ser. 516*: 127-138. dx.doi.org/10.3354/meps11035

Pautler, B.G.; Reichart, G.-J.; Sanborn, P.T.; Simpson, M.J.; Weijers, J.W.H. (2014). Comparison of soil derived tetraether membrane lipid distributions and plant-wax dD compositions for reconstruction of Canadian Arctic temperatures. *Palaeogeogr. Palaeoclimatol. Palaeoecol. 404*: 78-88. dx.doi.org/10.1016/j.palaeo.2014.03.038

Pavlov, A.K.; Silyakova, A.; Granskog, M.A.; Bellerby, R.G.J.; Engel, A.; Schulz, K.G.; Brussaard, C.P.D. (2014). Marine CDOM accumulation during a coastal Arctic mesocosm experiment: No response to elevated pCO2 levels. *J. Geophys. Res. Biogiosciences, 119(6)*: 1216–1230. dx.doi.org/10.1002/2013JG002587

Penning-Rowsell, E.C.; de Vries, W.S.; Parker, D.J.; Zanuttigh, B.; Simmonds, D.; Trifonova, E.; Hissel, F.; Monbaliu, J.; Lendzion, J.; Ohle, N.; Diaz, P.; Bouma, T. (2014). Innovation in coastal risk management: An exploratory analysis of risk governance issues at eight THESEUS study sites. *Coast. Eng. 87*: 210-217. dx.doi.org/10.1016/j.coastaleng.2013.12.005

Philippart, C.J.M.; van Bleijswijk, J.; Kromkamp, J.C.; Zuur, A.F.; Herman, P.M.J. (2014). Reproductive phenology of coastal marine bivalves in a seasonal environment. *J. Plankton Res. 36(6)*: 1512-1527. dx.doi.org/10.1093/plankt/fbu073

Piersma, T.; MacCurdy, R.B.; Gabrielson,, R.M.; Dekinga, A.; Cluderay, J.; Spaulding, E.L.; Oudman, T.; van Gils, J.; Winkler, D.; Bijleveld, A. (2014). Fijnmazige positiebepaling van individuen in groepen : de principes en drie toepassingen van TOA-tracking. *Limosa (Amst.) 87*: 156-176

Piquet, A.M.-T.; van de Poll, W.H.; Visser, R.J.W.; Wiencke, C.; Bolhuis, H.; Buma, A.G.J. (2014). Springtime phytoplankton dynamics in Arctic Krossfjorden and Kongsfjorden (Spitsbergen) as a function of glacier proximity. *Biogeosciences 11(8)*: 2263-2279. dx.doi.org/10.5194/bg-11-2263-2014 [OA gold]

Prenafeta Boldú, F.X.; Summerbell, R.C.; de Boer, W.; Boschker, H.T.S.; Gamsformerly, W. (2014). Biodiversity and ecology of soil fungi in a primary succession of a temperate coastal dune system. *Nova Hedwigia 99(3-4)*: 347-372. dx.doi.org/10.1127/0029-5035/2014/0203

Prouty, N.G.; Roark, E.B.; Koenig, A.E.; Demopoulos, A.W.J.; Batista, F.C.; Kocar, B.D.; Selby, D.; McCarthy, M.D.; Mienis, F. (2014). Deep-sea coral record of human impact on watershed quality in the Mississippi River Basin. *Global Biogeochem. Cycles 28(1)*: 29-43. dx.doi.org/10.1002/2013GB004754 [OA green]

Pulsifer, P.L.; Yarmey, L.; Godøy, O.; Friddell, J.; Parsons, M.; Vincent, W.F.; de Bruin, T.F.; Manley, W.; Gaylord, A.; Hayes, A.; Nickels, S.; Tweedy, C.; Larsen, J.R.; Huck, J. (2014). Towards an International Polar Data Coordination Network. *Data Science Journal 13*: PDA94-PDA102. dx.doi.org/10.2481/dsj.IFPDA-16 [OA gold]

Rabitti, A.; Maas, L.R.M. (2014). Inertial wave rays in rotating spherical fluid domains. *J. Fluid Mech. 758*: 621- 654. dx.doi.org/10.1017/jfm.2014.551

Rakhimberdiev, E.N.; Karagicheva, J.; Winkler, D.W.; Jaatinen, K.; Phillips, J.B.; Piersma, T. (2014). Naïve migrants and the use of magnetic cues: temporal fluctuations in the geomagnetic field differentially affect male and female Ruff *Philomachus pugnax* during their first migration. *Ibis 156*: 864-869. dx.doi.org/ 10.1111/ibi.12172

Rampen, S.; Datema, M.; Rodrigo-Gámiz, M.; Schouten, S.; Reichart, G.-J.; Sinninghe Damsté, J.S. (2014). Sources and proxy potential of long chain alkyl diols in lacustrine environments. *Geochim. Cosmochim. Acta 144*: 59–71. dx.doi.org/10.1016/j.gca.2014.08.033 [OA green]

Rampen, S.W.; Willmott, V.; Kim, J.H.; Rodrigo-Gamiz, M.; Uliana, E.; Mollenhauer, G.; Schefuß, E.; Sinninghe Damsté, J.S.; Schouten, S. (2014). Evaluation of long chain 1,14-alkyl diols in marine sediments as indicators for upwelling and temperature. *Org. Geochem. 76*: 39–47. dx.doi.org/10.1016/j.orggeochem.2014.07.012 [OA green]

Rao, A.M.F.; Malkin, S.Y.; Montserrat, F; Meysman, F.J.R. (2014). Alkalinity production in intertidal sands intensified by lugworm bioirrigation. *Est., Coast. and Shelf Sci. 148*: 36-47. hdl.handle.net/10.1016/j.ecss.2014.06.006 [OA gold]

Rashid, R.; Eisenhauer, A.; Stocchi, P.; Liebetrau, V.; Fietzke, J.; Rüggeberg, A.; Dullo, W.-C. (2014). Constraining mid to late Holocene relative sea level change in the southern equatorial Pacific Ocean relative to the Society Islands, French Polynesia. *Geochem. Geophys. Geosyst. 15(6)*: 2601-2615. hdl.handle.net/10.1002/2014GC005272 [OA green]

Rasigraf, O.; Kool, D.M.; Jetten, M.S.M.; Ettwig, K.F.; Sinninghe Damsté, J.S. (2014). Autotrophic carbon dioxide fixation via the Calvin-Benson-Bassham cycle by the denitrifying methanotroph "*Candidatus* Methylomirabilis oxyfera". *Appl. Environ. Microbiol. 80(8)*: 2451-2460. dx.doi.org/10.1128/AEM.04199-13 [OA gold]

Reneerkens, J.; van Veelen, P.; van der Velde, M.; Luttikhuizen, P.; Piersma, T. (2014). Within-population variation in mating system and parental care patterns in the Sander ling (*Calidris alba*) in northeast Greenland. *The Auk 131(2)*: 235-247. dx.doi.org/10.1642/AUK-13-247.1 [OA green]

Reul, A.; Muñoz, M.; Bautista, A.; Neale, P.J.; Sobrino, C.; Mercado, J.M.; Segovia, M.; Salles, S.; Kulk, G.; Léon, P.; van de Poll, W.H.; Pérez, E.; Buma, A.; Blanco, J.M. (2014). Effect of CO_2, nutrients and light on coastal plankton. III. Trophic cascade, size structure and composition. *Aquat. Biol. 22*: 59-76. dx.doi.org/10.3354/ab00585 [OA gold]

Rhijn, J. van; Jukema, J.; Piersma, T. (2014). Diversity of Nuptial Plumages in Male Ruffs *Philomachus pugnax*. *Ardea 102(1)*: 5-20. hdl.handle.net/10.5253/078.102.0103

Rijkenberg, M.J.A.; Middag, R.; Laan, P.; Gerringa, L.J.A.; van Aken, H.M.; Schoemann, V.; de Jong, J.T.; de Baar, H.J.W. (2014). The Distribution of Dissolved Iron in the West Atlantic Ocean. *PLoS One 9(6)*: e101323 1-14. hdl.handle.net/10.1371/journal.pone.0101323 [OA gold]

Roche, R.C.; Perry, C.T.; Smithers, S.G.; Leng, M.J.; Grove, C.A.; Sloane, H.J.; Unsworth, C.E. (2014). Mid-Holocene sea surface conditions and riverine influence on the inshore Great Barrier Reef. *Holocene 24*: 885-897. hdl.handle.net/10.1177/0959683614534739 [OA gold]

Rodil, I.F.; Compton, T.J.; Lastra, M. (2014). Geographic variation in sandy beach macrofauna community and functional traits. *Est., Coast. and Shelf Sci. 150(part A)*: 102–110. dx.doi.org/10.1016/j.ecss.2013.06.019

Rodrigo-Gámiz, M.; Martínez-Ruiz, F.; Rampen, S.W.; Schouten, S.; Sinninghe Damsté, J.S. (2014). Sea surface temperature variations in the western Mediterranean Sea over the last 20 kyr: A dual-organic proxy (UK'_{37} and LDI) approach. *Paleoceanography 29(2)*: 87-98. dx.doi.org/10.1002/2013PA002466 [OA gold]

Rodriguez-Ramirez, A.; Grove, C.A.; Zinke, J.; Pandolfi, J.M.; Zhao, J.-X. (2014). Coral Luminescence Identifies the Pacific Decadal Oscillation as a Primary Driver of River Runoff Variability Impacting the Southern Great Barrier Reef. *PLoS One 9(1)*: e84305. dx.doi.org/10.1371/journal.pone.0084305 [OA gold]

Rugenstein, M.; Stocchi, P.; van der Heydt, A.; Brinkhuis, H. (2014). Emplacement of Antarctic ice sheet mass affects circumpolar ocean flow. *Global Planet. Change 118*: 16-24. hdl.handle.net/10.1016/j.gloplacha.2014.03.011

Rush, D.; Sinninghe Damsté, J.S.; Poulton, S.W.; Thamdrup, B.; Leigh Garside, A.; Acuña-Gonzalez, J.; Schouten, S.; Jetten, M.S.M.; Talbot, H.M. (2014). Anaerobic ammonium-oxidising bacteria: A biological source of the bacteriohopanetetrol stereoisomer in marine sediments. *Geochim. Cosmochim. Acta 140*: 50-63. dx.doi.org/10.1016/j.gca.2014.05.014 [OA green]

Rush, D.; Jaeschke, A.; Geenevasen, J.A.J.; Tegelaar, E.; Pureveen, J.; Lewan, M.D.; Schouten, S.; Sinninghe Damsté, J.S. (2014). Generation of unusual branched long chain alkanes from hydrous pyrolysis of anammox bacterial biomass. *Org. Geochem. 76*: 136–145. dx.doi.org/10.1016/j.orggeochem.2014.08.002 [OA green]

Sanders, D.; Jones, C.G.; Thébault, E.; Bouma, T.J.; van der Heide, T.; van Belzen, J.; Barot, S. (2014). Integrating ecosystem engineering and food webs. *Oikos (Kbh.) 123(5)*: 513-524. dx.doi.org/10.1111/j.1600-0706.2013.01011.x

Saraiva, S.; van der Meer, J.; Kooijman, S.A.L.M.; Ruardij, P. (2014). Bivalves: From individual to population modelling. *J. Sea Res. 94*: 71–83. dx.doi.org/10.1016/j.seares.2014.06.004

Sassi, M.G.; Leijnse, H.; Uijlenhoet, R. (2014). Sensitivity of power functions to aggregation: Bias and uncertainty in radar rainfall retrieval. *Water resources research 50(10)*: 8050–8065. dx.doi.org/10.1002/2013WR015109

Schoelynck, J.; Bal, K.; verschoren, V.; Penning, E.; Struyf, E.; Bouma, T.; Meire, D.; Meire, P.; Temmerman, S. (2014). Different morphology of *Nuphar lutea* in two contrasting aquatic environments and its effect on ecosystem engineering. *Earth Surf. Process. Landforms 39(15)*. dx.doi.org/10.1002/esp.3607

Schouten, S.; Villanueva, L.; Hopmans, E.C.; van der Meer, M.T.J.; Sinninghe Damsté, J.S. (2014). Are Marine Group II Euryarchaeota significant contributors to tetraether lipids in the ocean? *Proc. Natl. Acad. Sci. U.S.A. 111(41)*: e4285. dx.doi.org/10.1073/pnas.1416176111 [OA green]

Schuurmans, R.M.; Schuurmans, J.M.; Bekker, M.; Kromkamp, J.C.; Matthijs, H.C.P.; Hellingwerf, K.J. (2014). The Redox Potential of the Plastoquinone Pool of the Cyanobacterium *Synechocystis* Species Strain PCC 6803 Is under Strict Homeostatic Control. *Plant Physiol. 165(1)*: 463-475. dx.doi.org/10.1104/pp.114.237313

Schwarz, C.; Ye, Q.H.; van der Wal, D.; Zhang, L.Q.; Bouma, T.; Ysebaert, T.; Herman, P.M.J. (2014). Impacts of salt marsh plants on tidal channel initiation and inheritance. *Journal of Geophysical Research: Earth Surface 119(2)*: 385-400. dx.doi.org/10.1002/2013JF002900 [OA green]

Seitz, R.D.; Wennhage, H.; Bergstrom, U.; Lipcius, R.N.; Ysebaert, T. (2014). Ecological value of coastal habitats for commercially and ecologically important species. *ICES J. Mar. Sci./J. Cons. int. Explor. Mer 71(3)*: 648-665. dx.doi.org/10.1093/icesjms/fst152 [OA gold]

Seki, O.; Mikami, Y.; Nagao, S.; Bendle, J.A.; Nakatsuka, T.; Kim, V.I. ; Shesterkin, V.P.; Makinov, A.N.; Fukushima, M.; Moossen, H.M.; Schouten, S. (2014). Lignin phenols and BIT index distributions in the Amur River and the Sea of Okhotsk: Implications for the source and transport of particulate terrestrial organic matter to the ocean. *Prog. Oceanogr. 126*: 146-154. hdl.handle.net/10.1016/j.pocean.2014.05.003

Sheik, A.R.; Brussaard, C.P.D.; Lavik, G.; Lam, P.; Musat, N.; Krupke, A.; Littmann, S.; Strous, M.; Kuypers, M.M.M. (2014). Responses of the coastal bacterial community to viral infection of the algae *Phaeocystis globosa*. *ISME J. 8(1)*: 212-225. dx.doi.org/10.1038/ismej.2013.135 [OA gold]

Siliman, B.R.; Mozdzer, T.; Angelini, C.; Brundage, J.E.; Esselink, P.; Bakker, J.P.; Gedan, K.B.; van de Koppel, J.; Baldwin, A.H. (2014). Livestock as a potential biological control agent for an invasive wetland plant. *PeerJ 2*: e567. dx.doi.org/10.7717/peerj.567 [OA gold]

Sinninghe Damsté, J.S.; Schouten, S.; Volkman, J.K. (2014). C_{27}-C_{30} neohop-13(18)-enes and their saturated and aromatic derivatives in sediments: Indicators for diagenesis and water column stratification. *Geochim. Cosmochim. Acta 133*: 402-421. dx.doi.org/10.1016/j.gca.2014.03.008 [OA green]

Sinninghe Damsté, J.S.; Rijpstra, W.I.C.; Hopmans, E.C.; Foesel, B.U.; Wüst, P.K.; Overmann, J.; Tank, M.; Bryant, D.A.; Dunfield, P.F.; Houghton, K.; Stott, M. (2014). Ether- and Ester-Bound iso-Diabolic Acid and Other Lipids in Members of *Acidobacteria* Subdivision 4. *Appl. Environ. Microbiol. 80(17)*: 5207-5218. hdl.handle.net/10.1128/AEM.01066-14 [OA green]

Slangen, A.B.A.; van de Wal, R.S.W.; Wada, Y.; Vermeersen, L.L.A. (2014). Comparing tide gauge observations to regional patterns of sea-level change (1961–2003). *Earth System Dynamics 5*: 243-255. hdl.handle.net/10.5194/esd-5-243-2014 [OA gold]

Slangen, A.B.A.; Carson, M.; Katsman, C.A.; van de Wal, R.S.W.; Köhl, A.; Vermeersen, L.L.A.; Stammer, D. (2014). Projecting twenty-first century regional sea-level changes. *Clim. Change 124(1-2)*: 317-332. dx.doi.org/10.1007/s10584-014-1080-9

Sliwinska, K.K.; Dybkjær, K.; Schoon, P.L.; Beyer, C.; King, C.; Schouten, S.; Nielsen, O.B. (2014). Paleoclimatic and paleoenvironmental records of the Oligocene-Miocene transition, central Jylland, Denmark. *Mar. Geol. 350*: 1-15. dx.doi.org/10.1016/j.margeo.2013.12.014

Sluijs, A.; van Roij, L.; Harrington, G.J.; Schouten, S.; Sessa, J.A.; LeVay, L.J.; Reichart, G.-J.; Slomp, C.P. (2014). Warming, euxinia and sea level rise during the Paleocene–Eocene Thermal Maximum on the Gulf Coastal Plain: implications for ocean oxygenation and nutrient cycling. *Clim. Past 10*: 1421-1439. hdl.handle.net/10.5194/cp-10-1421-2014 [OA gold]

Smeulders, G.G.B.; Koho, K.A.; de Stigter, H.C.; Mienis, F.; de Haas, H.; van Weering, T.C.E. (2014). Cold-water coral habitats of Rockall and Porcupine Bank, NE Atlantic Ocean: Sedimentary facies and benthic foraminiferal assemblages. *Deep-Sea Res., Part 2, Top. Stud. Oceanogr. 99*: 270-285. dx.doi.org/10.1016/j.dsr2.2013.10.001

Smietanka, B.; Burzynski, A.; Hummel, H.; Wenne, R. (2014). Glacial history of the European marine mussels *Mytilus*, inferred from distribution of mitochondrial DNA lineages. *Heredity 113*: 250-258. hdl.handle.net/10.1038/hdy.2014.23

Smith, A.J.; Mienert, J.; Bünz, S.; Greinert, J. (2014). Thermogenic methane injection via bubble transport into the upper Arctic Ocean from the hydrate-charged Vestnesa Ridge, Svalbard. *Geochem. Geophys. Geosyst. 15(5)*: 1945-1959. hdl.handle.net/10.1002/2013GC005179

Snik, F.; Rietjens, J.H.H.; Apituley, A.; Volten, H.; Mijling, B.; Di Noia, A.; Heikamp, S.; Heinsbroek, R.C.; Hasekamp, O.P.; Smit. , J.M.; Vonk, J.; Stam, D.M.; van Harten, G.; de Boer, J.; Keller, C.U.; iSPEX citizen scientists; Stuut, J.B.W.; Wernand, M.R.; Philippart, C.J.M. (2014). Mapping atmospheric aerosols

with a citizen science network of smartphone spectropolarimeters. *Geophys. Res. Lett. 41(20)*: 7351–7358. hdl.handle.net/10.1002/2014GL061462 [OA gold]

Soelen, E.E. van; Lammers, J.M.; Eglinton, T.I.; Sinninghe Damsté, J.S.; Reichart, G.-J. (2014). Unusual C_{35} to C_{38} alkenones in mid-Holocene sediments from a restricted estuary (Charlotte Harbor, Florida). *Org. Geochem. 70*: 20-28. dx.doi.org/10.1016/j.orggeochem.2014.01.021 [OA green]

Soissons, L.M.; Han, Q.; Li, B.; van Katwijk, M.M.; Ysebaert, T.; Herman, P.M.J.; Bouma, T.J. (2014). Cover versus recovery: Contrasting responses of two indicators in seagrass beds. *Mar. Pollut. Bull. 87(1-2)*: 211–219. dx.doi.org/10.1016/j.marpolbul.2014.07.057

Sorokin, D.Y.; Vejmelkova, D.; Lücker, S.; Streshinskaya, G.M.; Rijpstra, W.I.C.; Sinninghe Damsté, J.; Kleerbezem, R.; van Loosdrecht, M.C.M.; Muyzer, G.; Daims, H. (2014). *Nitrolancea hollandica* gen. nov., sp. nov., a chemolithoautotrophic nitrite-oxidizing bacterium isolated from a bioreactor belonging to the phylum *Chloroflexi*. *Int. J. Syst. Evol. Microbiol. 64(6)*: 1859-1865. hdl.handle.net/10.1099/ijs.0.062232-0

Sorokin, D.Y.; Gumerov, V.M.; Rakitin, A.L.; Beletsky, A.V.; Sinninghe Damsté, J.S.; Muyzer, G.; Mardanov, A.V.; Ravin, N.V. (2014). Genome analysis of *Chitinivibrio alkaliphilus* gen. nov., sp. nov., a novel extremely haloalkaliphilic anaerobic chitinolytic bacterium from the candidate phylum Termite Group 3. *Environ. Microbiol. 16(6)*: 1549–1565. dx.doi.org/10.1111/1462-2920.12284

Steenhauer, L.M.; Pollard, P.C.; Brussaard, C.P.D.; Säwström, C. (2014). Lysogenic infection in sub-tropical freshwater cyanobacteria cultures and natural blooms. *Mar. Freshw. Res. 65(7)*: 624-632. hdl.handle.net/10.1071/MF13094

Steinhardt, J.; Cléroux, C.; Ullgren, J.E.; de Nooijer, L.J.; Durgadoo, J.V.; Brummer, G.J.A.; Reichart, G.J. (2014). Anti-cyclonic eddy imprint on calcite geochemistry of several planktonic foraminiferal species in the Mozambique Channel. *Mar. Micropaleontol. 113*: 20–33. dx.doi.org/10.1016/j.marmicro.2014.09.001 [OA green]

Steur, L. de; Hansen, E.; Mauritzen, C.; Beszczynska-Möller, A.; Fahrbach, E. (2014). Impact of recirculation on the East Greenland Current in Fram Strait: Results from moored current meter measurements between 1997 and 2009. *Deep-Sea Res., Part 1, Oceanogr. Res. Pap. 92*: 26-40. dx.doi.org/10.1016/j.dsr.2014.05.018

Stuut, J.-B.W.; Temmesfeld, F.; De Deckker, P. (2014). A 550 ka record of aeolian activity near North West Cape, Australia: inferences from grain-size distributions and bulk chemistry of SE Indian Ocean deep-sea sediments. *Quat. Sci. Rev. 83*: 83-94. dx.doi.org/10.1016/j.quascirev.2013.11.003

Svensson, E.; Freitas, V.; Schouten, S.; Middelburg, J.J.; van der Veer, H.W.; Sinninghe Damsté, J.S. (2014). Comparison of the stable carbon and nitrogen isotopic values of gill and white muscle tissue of fish. *J. Exp. Mar. Biol. Ecol. 457*: 173-179. dx.doi.org/10.1016/j.jembe.2014.04.014 [OA green]

Tamooh, F.; Meysman, F.; Borges, A.V.; Marwick, T.R.; van den Meersche, K.; Dehairs, F.; Merckx, R.; Bouillon, S. (2014). Sediment and carbon fluxes along a longitudinal gradient in the lower Tana River (Kenya). *J. Geophys. Res. Biogeosciences 119(7)*: 1340-1353. hdl.handle.net/10.1002/2013JG002358 [OA green]

Thomas, E.K.; Clemens, S.C.; Prell, W.L.; Herbert, T.D.; Huang, Y.S.; Liu, Z.; Sinninghe Damsté, J.S.; Sun, Y.; Wen, X. (2014). Temperature and leaf wax d^2H records demonstrate seasonal and regional controls on Asian monsoon proxies. *Geology (Boulder Colo.) 42(12)*: 1075-1078. dx.doi.org/10.1130/G36289.1

Thomas, R.E.; Johnson, M.F.; Frostick, L.E.; Parsons, D.R.; Bouma, T.J.; Dijkstra, J.T.; Eiff, O.; Gobert, S.; Henry, P.; Kemp, P.; McLelland, S.J.; Moulin, F.Y.; Myrhaug, D.; Neyts, A.; Paul, M.; Penning, W.E.; Puijalon, S.; Rice, S.P.; Stanica, A.; Tagliapietra, D.; Tal, M.; Torum, A.; Vousdoukas, M.I. (2014). Physical modelling of water, fauna and flora: knowledge gaps, avenues for futureresearch and infrastructural needs. *J. Hydraul. Res. 42(3)*: 1-15. dx.doi.org/10.1080/00221686.2013.876453

Tiessen, M.C.H.; Fernand, L.; Gerkema, T.; van der Molen, J.; Ruardij, P.; van der Veer, H.W. (2014). Numerical modelling of physical processes governing larval transport in the southern North Sea. *Ocean Sci. 10*: 357-376. dx.doi.org/10.5194/os-10-357-2014 [OA gold]

Tjallingii, R.; Sattegger, K.; Stocchi, P.; Saito, Y.; Wetzel, A. (2014). Rapid flooding of the southern Vietnam shelf during the early to mid-Holocene. *J. Quaternary Sci. 29(6)*: 581–588. dx.doi.org/10.1002/jqs.2731

Toussaint, A.; Beauchard, O.; Oberdorff, T.; Brosse, S.; Villéger, S. (2014). Historical assemblage distinctiveness and the introduction of widespread non-native species explain worldwide changes in freshwater fish taxonomic dissimilarity. *Glob. Ecol. Biogeogr. 23(5)*: 574-584. dx.doi.org/10.1111/geb.12141

Toyofuku, T.; Duros, P.; Fontanier, C.; Mamo, B.; Bichon, S.; Buscail, R.; Chabaud, R.; Deflandre, B.; Gaubet, S.; Grémare, A.; Menniti, C.; Fujii, M.; Kawamura, K.; Koho, K.A.; Noda, A.; Namegaya, Y.; Oguri, K.; Radakovitch, O.; Murayama, M.; de Nooijer, L.J.; Kurasawa, A.; Ohkawara, N.; Okutani, T.; Sakaguchi, A.; Jorissen, F.J.; Reichart, G.J.; Kitazato, H. (2014). Unexpected biotic resilience on the Japanese seafloor caused by the 2011 Tohoku-Oki tsunami. *NPG Scientific Reports 4(7517)*: 8 pp. dx.doi.org/10.1038/srep07517 [OA gold]

Trimbos, K.B.; Doorenweerd, C.; Kraaijeveld, K.; Musters, C.J.M.; Groen, N.M.; de Knijff, P.; Piersma, T.; de Snoo, G.R. (2014). Patterns in Nuclear and Mitochondrial DNA Reveal Historical and Recent Isolation in the Black-Tailed Godwit (*Limosa Limosa*). *PLoS One 9(1)*: e83949. dx.doi.org/10.1371/journal.pone.0083949 [OA gold]

Vandorpe, T.; Van Rooij, D.; de Haas, H. (2014). Stratigraphy and palaeoceanography of a topography-controlled contourite drift in the Pen Duick area, southern Gulf of Cádiz. *Mar. Geol. 349*: 136-151. hdl.handle.net/10.1016/j.margeo.2014.01.007 [OA green]

Veen, T.; Hjernquist, M.B.; Van Wilgenburg, S.L.; Hobson, K.A.; Folmer, E.; Font, L.; Klaassen, M. (2014). Identifying the African Wintering Grounds of Hybrid Flycatchers Using a Multi-Isotope (δ^2H, δ^{13}C, δ^{15}N) Assignment Approach. *PLoS One 9(5)*: e98075. dx.doi.org/10.1371/journal.pone.0098075 [OA gold]

Vellekoop, J.; Sluijs, A.; Smit, J.; Schouten, S.; Weijers, J.W.H.; Sinninghe Damsté, J.S.; Brinkhuis, H. (2014). Rapid short-term cooling following the Chicxulub impact at the Cretaceous-Paleogene boundary. *Proc. Natl. Acad. Sci. U.S.A. 111(21)*: 7537-7541. dx.doi.org/10.1073/pnas.1319253111

Verkuil, Y.I.; Juillet, C.; Lank, D.B.; Widemo, F.; Piersma, T. (2014). Genetic variation in nuclear and mitochondrial markers supports a large sex difference in lifetime reproductive skew in a lekking species. *Ecol. Evol. 4(18)*: 3626-3632. hdl.handle.net/10.1002/ece3.1188 [OA gold]

Vermeulen, B.; Hoitink, A.J.F.; Sassi, M.G. (2014). Improved flow velocity estimates from moving-boat ADCP measurements. *Water resources research 50(5)*: 4186–4196. hdl.handle.net/10.1002/2013WR015152 [OA green]

Villanueva, L.; Sinninghe Damsté, J.S.; Schouten, S. (2014). A re-evaluation of the archaeal membrane lipid biosynthetic pathway. *Nat. Rev., Microbiol. 12(6)*: 438-448. dx.doi.org/10.1038/nrmicro3260 [OA green]

Villanueva, L.; Hopmans, E.C.; Bale, N.; Schouten, S.; Sinninghe Damsté, J.S. (2014). Diversity and distribution of a key sulpholipid biosynthetic gene in marine microbial assemblages. *Environ. Microbiol. 16(3)*: 774-787. dx.doi.org/10.1111/1462-2920.12202 [OA green]

Villanueva, L.; Rijpstra, W.I.C.; Schouten, S.; Sinninghe Damsté, J.S. (2014). Genetic biomarkers of the sterol-biosynthetic pathway in microalgae. *Environmental Microbiology Reports 6(1)*: 35-44. dx.doi.org/10.1111/1758-2229.12106 [OA green]

Villanueva, L.; Besseling, M.; Rodrigo-Gamiz, M.; Rampen, S.; Verschuren, D.; Sinninghe Damsté, J.S. (2014). Potential biological sources of long chain alkyl diols in a lacustrine system. *Org. Geochem. 68*: 27-30. dx.doi.org/10.1016/j.orggeochem.2014.01.001 [OA green]

Villanueva, L.; Speth, D.R.; van Alen, T.; Hoischen, A.; Jetten, M.S.M. (2014). Shotgun metagenomic data reveals significant abundance but low diversity of "*Candidatus Scalindua*" marine anammox bacteria in the Arabian Sea oxygen minimum zone. *Front. Microbiol. 5*: 31, 1-9. dx.doi.org/10.3389/fmicb.2014.00031 [OA gold]

Vries, J.J. de; Nauw, J.J.; Ridderinkhof, H.; van Aken, H.M. (2014). An exploratory study of the variability of currents and density in the Marsdiep. *Cont. Shelf Res. 84*: 70-83. hdl.handle.net/10.1016/j.csr.2014.05.003

Wal, D. van der; van Dalen, J.; Wielemaker-van den Dool, A.; Dijkstra, J.T.; Ysebaert, T. (2014). Biophysical control of intertidal benthic macroalgae revealed by high-frequency multispectral camera images. *J. Sea Res. 90*: 111-120. hdl.handle.net/10.1016/j.seares.2014.03.009

Wesenbeeck, B.K. van; Mulder, J.P.M.; Marchand, M.; Reed, D.J.; de Vries, M.B.; de Vriend, H.J.; Herman, P.M.J. (2014). Damming deltas: A practice of the past? Towards nature-based flood defenses. *Est., Coast. and Shelf Sci. 140*: 1-6. dx.doi.org/10.1016/j.ecss.2013.12.031

Weijers, J.W.H.; Schefuß, E.; Kim, J.-H.; Sinninghe Damsté, J.; Schouten, S. (2014). Constraints on the sources of branched tetraether membrane lipids in distal marine sediments. *Org. Geochem. 72*: 14-22. dx.doi.org/10.1016/j.orggeochem.2014.04.011

Welsh, J.E.; van der Meer, J.; Brussaard, C.P.D.; Thieltges, D.W. (2014). Inventory of organisms interfering with transmission of a marine trematode. *J. Mar. Biol. Ass. U.K. 94(4)*: 697–702. dx.doi.org/10.1017/S0025315414000034 [OA green]

Wijgerde, T.; Silva, C.I.F.; Scherders, V.; van Bleijswijk, J.; Osinga, R. (2014). Coral calcification under daily oxygen saturation and pH dynamics reveals the important role of oxygen. *Biology Open 3*: 489-493. dx.doi.org/10.1242/bio.20147922 [OA gold]

Wijgerde, T.; van Melis, A.; Silva, C.I.F.; Leal, M.C.; Vogels, L.; Mutter, C.; Osinga, R. (2014). Red Light Represses the Photophysiology of the Scleractinian Coral *Stylophora pistillata*. *PLoS One 9(3)*: e92781. dx.doi.org/10.1371/journal.pone.0092781 [OA gold]

Winden, J. van der; Fijn, R.C.; van Horssen, P.; Gerritsen-Davidse, D.; Piersma, T. (2014). Idiosyncratic Migrations of Black Terns (*Chlidonias niger*): Diversity in Routes and Stopovers. *Waterbirds (De Leon Springs Fla.) 37(2)*: 162-174. hdl.handle.net/10.1675/063.037.0205 [OA green]

Winkler, D.W.; Ringelman, K.R.; Dunn, P.O.; Whittingham, L.; Hussell, D.J.T.; Clark, R.G.; Dawson, R.D.; Johnson, L.S.; Rose, A.; Austin, S.H.; Robinson, W.D.; Lombardo, M.P.; Thorpe, P.A.; Shutler, D.; Robertson, R.J.; Stager, M.; Leonard, L.; Horn, A.G.; Dickinson, J.; Ferretti, V.; Massoni, V.; Bulit, F.; Reboreda, J.C.; Liljesthröm, M; Quiroga, M.; Rakhimberdiev, E.; Ardia, D.R. (2014). Latitudinal variation in clutch size–lay date regressions in *Tachycineta* swallows: effects of food supply or demography? *Ecography 37(7)*: 670–678. hdl.handle.net/10.1111/j.1600-0587.2013.00458.x

Winter, C.; Garcia, J.A.L.; Weinbauer, M.G.; DuBow, M.S.; Herndl, G.J. (2014). Comparison of Deep-Water Viromes from the Atlantic Ocean and the Mediterranean Sea. *PLoS One 9(6)*: e100600 1-8. hdl.handle.net/10.1371/journal.pone.0100600 [OA gold]

Woulds, C.; Middelburg, J.J.; Cowie, G.L. (2014). Alteration of organic matter during infaunal polychaete gut passage and links to sediment organic geochemistry. Part II: Fatty acids and aldoses. *Geochim. Cosmochim. Acta 136*: 38-59. dx.doi.org/10.1016/j.gca.2014.02.013

Yaakub, S.M.; Chen, E.; Bouma, T.; Erftemeijer, P.L.A.; Todd, P.A. (2014). Chronic light reduction reduces overall resilience to additional shading stress in the seagrass *Halophila ovalis*. *Mar. Pollut. Bull. 83*: 467-474. hdl.handle.net/10.1016/j.marpolbul.2013.11.030

Yaakub, S.M.; McKenzie, L.J.; Erftemeijer, P.L.A.; Bouma, T.; Todd, P.A. (2014). Courage under fire: Seagrass persistence adjacent to a highly urbanisedcity–state. *Mar. Pollut. Bull. 83*: 417-424. hdl.handle.net/10.1016/j.marpolbul.2014.01.012

Zee, E.M. van der; Tielens, E.; Holthuijsen, S.; Donadi, S.; Eriksson, B.K.; van der Veer, H.W.; Piersma, T.; Olff, H.; van der Heide, T. (2014). Habitat modification drives benthic trophic diversity in an intertidal soft-bottom ecosystem. *J. Exp. Mar. Biol. Ecol. 465*: 41–48. dx.doi.org/10.1016/j.jembe.2015.01.001

Zell, C.; Kim, J.H.; Hollander, D.; Lorenzoni, L.; Baker, P.; Guizan Silva, G.S.; Sinninghe Damsté, J.S. (2014). Sources and distributions of branched and isoprenoid tetraether lipids on the Amazon shelf and fan: Implications for the use of GDGT-based proxies in marine sediments. *Geochim. Cosmochim. Acta 139*: 293–312. hdl.handle.net/10.1016/j.gca.2014.04.038 [OA gold]

Zell, C.; Kim, J.H.; Balsinha, M.; Dorhout, D.; Fernandes, C.; Baas, M.; Sinninghe Damsté, J.S. (2014). Transport of branched tetraether lipids from the Tagus River basin to the coastal ocean of the Portuguese margin: consequences for the interpretation of the MBT'/CBT paleothermometer. *Biogeosciences 11*: 5637-5655. dx.doi.org/10.5194/bg-11-5637-2014 [OA gold]

Zetsche, E.-M.; El Mallahi, A.; Dubois, F.; Yourassowsky, C.; Kromkamp, J.C.; Meysman, F (2014). Imaging-in-Flow: Digital holographic microscopy as a novel tool to detect and classify nanoplanktonic organisms. *Limnol. Oceanogr., Methods 42(12)*: 757-775. hdl.handle.net/10.4319/lom.2014.12.757 [OA green]

Zhang, Y.; Zhao, Z.; Dai, M.; Jiao, N.; Herndl, G.J. (2014). Drivers shaping the diversity and biogeography of total and active bacterial communities in the South China Sea. *Mol. Ecol. 23(9)*: 2260-2274. dx.doi.org/10.1111/mec.12739 [OA gold]

Zhang, Y.; Maignien, L.; Stadnitskaia, A.; Boeckx, P.; Xiao, X.; Boon, N. (2014). Stratified Community Responses to Methane and Sulfate Supplies in Mud Volcano Deposits: Insights from an *In Vitro* Experiment. *PLoS One 9(11)*: e113004. dx.doi.org/10.1371/journal.pone.0113004 [OA gold]

Zhao, Y.; Vance, D.; Abouchami, W.; de Baar, H.J.W. (2014). Biogeochemical cycling of zinc and its isotopes in the Southern Ocean. *Geochim. Cosmochim. Acta 125*: 653-672. dx.doi.org/10.1016/j.gca.2013.07.045

Zhu, Z.; Bouma, T.J.; Ysebaert, T.; Zhang, L.; Herman, P.M.J. (2014). Seed arrival and persistence at the tidal mudflat: identifying key processes for pioneer seedling establishment in salt marshes. *Mar. Ecol. Prog. Ser. 513*: 97-109. dx.doi.org/10.3354/meps10920

Zohar, I.; Bookman, R.; Levin, N.; de Stigter, H.; Teutsch, N. (2014). Contamination History of Lead and Other Trace Metals Reconstructed from an Urban Winter Pond in the Eastern Mediterranean Coast (Israel). *Environ. Sci. Technol. 48(23)*: 13592–13600. dx.doi.org/10.1021/es500530x

OA = open access

Non-refereed articles

Bom, R.A.; Abma, J.F.; Pieters, A.L. (2014). Doortrek van Bokjes in Laag Holland. *Limosa (Amst.) 86*: 209-216
Cadée, G.C.; Dijksen, S.; van Walraven, L. (2014). Grote zeepaddenstoelen (*Rhizostoma octopus*) aangespoeld op Texel. *Het Zeepaard 74(3)*: 98-105.
Cadée, G.C.; Bonne, E. (2014). Uit het dagboek van Jan Verwey: Hoogwaterschade op Griend in 1918. *Vogeljaar (Amst.) 62(1)*: 8-14.
Cadée, G.C.; Rühland, M. (2014). Een nieuw tropisch drijfzaad *Fevillea cordifolia* van ons strand. *Het Zeepaard 74(4)*: 136-142.
Cadée, G.C.; Rühland, M. (2014). Pit van een tropische *Spondias* CF. *pinnata* aangespoeld bij Castricum aan Zee. *Het Zeepaard 74(1)*: 24-28.
Cadé, G.C. (2014). *Natica (Euspira)* pas na vele boorpogingen succesvol. *Het Zeepaard 74*: 120-123.
Cadée, G.C. (2014). Book Review. Life traces on the Georgia Coast. *Ichnos 21(3)*: 211-212. dx.doi.org/10.1080/10420940.2014.934582.
Cadée, G.C. (2014). Een *Neptunea antiqua* (L. 1758) eikapsel van Texel. *Spirula 399*: 126.
Cadée, G.C. (2014). Noordhoren (*Neptunea antiqua*) eikapsels van de Nederlandse kust. *Het Zeepaard 74(6)*: 209-213.
Cadée, G.C. (2014). Subsidie zeestranden in gevaar. *Natura. 4*: 12-13.
Cadée, G.C. (2014). Veranderingen langs een stukje Waddendijk op Texel. *Spirula (Nederlandse ed.) 400*: 150-152.
Ens, B.J.; Bom, R.A.; Dokter, A.M.; Oosterbeek, K.; Jong, J.D.; Bouten, W. (2014). Nieuwe ontdekkingen en mogelijkheden in het onderzoek aan Scholeksters dankzij het UvA Bird Tracking Systeem. *Limosa (Amst.) 87*: 117-128.
Figueroa, F.L.; Mercado, J.M.; Beardall, J.; Neale, P.J.; Montecino, V.; Kromkamp, J.C. (2014). Introduction. *Aquat. Biol. 22*: 1-4. dx.doi.org/10.3354/ab00613.
Mienis, F; Duineveld, G.C.A.; Lavaleye, M.S.S.; van Weering, T.C.E. (2014). Proceedings ISDSC5. *Deep-Sea Res., Part II, Top. Stud. Oceanogr. 99*: 1-5. dx.doi.org/10.1016/j.dsr2.2013.10.003.
Vooijs, C.G.N. de (2014). Oesterkweek rond 1900. *Visserijnieuws 35(47)*.
Werschkun, B.; Banerji, S.; Basurko, O.C.; David, M.; Fuhr, F; Gollasch, S.; Grummt, T.; Haarich, M.; Jha, A.N.; Kacan, S.; Kehrer, A.; Linders, J.; Mesbahi, E.; Pughiuc, D.; Richardson, S.D.; Schwarz-Schulz, B.; Shah, A.; Theobald, N.; von Gunten, U.; Wieck, S.; Hofer, T. (2014). Emerging risks from ballast water treatment: The run-up to the International Ballast Water Management Convention. *Chemosphere 112*: 256-266. hdl.handle.net/10.1016/j.chemosphere.2014.03.135.

Books

Knippertz, P.; Stuut, J.-B. (2014). Mineral Dust : A Key Player in the Earth System. Springer: Dordrecht Heidelberg New York London. ISBN 9789401789783. I-XXV; 1-509 pp. hdl.handle.net/10.1007/978-94-017-8978-3.
Mumby, P.J.; Flower, J.; Chollett, I.; Box, S.; Bozec, Y.; Fitzsimmons, C.; Forster, J.; Gill, D.; Griffith-Mumby, R.; Oxenford, H.A.; Peterson, A.; Stead, S. M.; Turner, R.; Townsley, P.; van Beukering, P.; Booker, F.; Brocke, H.; Cabañillas-Terán, N.; Canty, S.; Carricart-Ganivet, J.P.; Charlery, J.; Dryden, C.; van Duyl, F.C.; Enríquez, S.; den Haan, J.; Iglesias-Prieto, R.; Kennedy, E.; Mahon, R.; Mueller, B.; Newman, S.J.; Nugues, M.; Cortés Núñez, J.; Nurse, L.; Osinga, R.; Paris, C.; Petersen, D.; Polunin, N. V. C.; Sánchez, C.; Schep, S.; Stevens, J.; Vallès, H.; Vermeij, M.J.A.; Visser, P.M.; Whittingham, E.; Williams, S. (2014). Towards Reef Resilience and Sustainable Livelihoods. A Handbook for Caribbean Coral Reef Managers. University of Exeter: Exeter, Devon, UK. ISBN 978-0-902746-31-2. 176 pp.

Sharma, N.K.; Rai, A.K.; Stal, L.J. (2014). Cyanobacteria : an economic perspective . Wiley-Blackwell: Chichester, West Sussex. ISBN 9781118402221. 376 pp. dx.doi.org/10.1002/9781118402238.

Chapters in books

Altieri, A.H.; Van de Koppel, J. (2014). Foundation species in marine ecosystems, *in*: Bertness, M.D. *et al. Marine community ecology and conservation.*

Camphuysen, C.J. (2014). Terug van weggeweest: Bruinvissen, *in*: Groen, N. *et al. Texel is anders : landschap, (cultuur)historie en natuur.* pp. 130-133.

Camphuysen, C.J. (2014). Zeezoogdieren, *in*: van der Mark, C. *et al.* (2014). *Zeeboek: determinatietabellen voor flora en fauna van de Nederlandse kust.* pp. 211-219.

Geslin, E.; Barras, C.; Langlet, D.; Nardelli, M.P.; Kim, J.-H.; Bonnin, J.; Metzger, E.; Jorissen, F.J. (2014). Survival, reproduction and calcification of three benthic foraminiferal species to experimentally induced hypoxia, *in*: Kitazato, H. & Bernhard, J.M. *Approaches to Study Living Foraminifera.* pp. 163-193.

Hoggart, S.; Hawkins, S.J.; Bohn, K.; Airoldi, L.; van Belzen, J.; Bichot, A.; Bilton, D.T.; Bouma, T.J.; Colangelo, M.A.; Davies, A.J.; Ferrario, F.; Firth, L.; Galvan, C.; Hanley, M.; Heurtefeux, H.; Lara, J.L.; Rodriquez, I.L.; Maza, M.; Ondiviela-Eizaguirre, B.; Rundle, S.D.; Skov, M.W.; Strain, E.M.; White, A.; Zhang, L.; Zhu, Z.; Thompson, R.C. (2014). Ecological Approaches to Coastal Risk Mitigation, *in*: Zanuttigh, B. *et al. Coastal Risk Management in a Changing Climate.* pp. 171-236. dx.doi.org/10.1016/B978-0-12-397310-8.00004-X.

Knippertz, P.; Stuut, J.-B. (2014). Introduction, *in*: Knippertz, P.; Stuut, J.-B. *Mineral Dust : A Key Player in the Earth System.* pp. 1-14. hdl.handle.net/10.1007/978-94-017-8978-3_1.

Monbaliu, J.; Bi, Q.; Bouma, T.J.; Toorman, E.A.; van Belzen, J.; Willems, P. (2014). Extreme Estuarine Water Levels and Channel Morphology, Effects on Flood Extents and Habitat Resilience: The Scheldt Estuary, Belgium and the Netherlands., *in*: Zanuttigh, B. *et al. Coastal Risk Management in a Changing Climate.* pp. 332-357. dx.doi.org/10.1016/B978-0-12-397310-8.00007-5

Sharma, N.K.; Rai, A.K.; Stal, L.J. (2014). Introduction, *in*: Sharma, N.K. *et al. Cyanobacteria : an economic perspective .* pp. xxi-xxiv. dx.doi.org/10.1002/9781118402238.fmatter.

Sharma, N.K.; Stal, L.J. (2014). The economics of cyanobacteria-based biofuel production: challenges and opportunities, *in*: Sharma, N.K. *et al. Cyanobacteria : an economic perspective.* pp. 167-180. dx.doi.org/10.1002/9781118402238.ch10.

Schuurmans, R.M.; Matthijs, H.C.P.; Stal, L.J.; Hellingwerf, K.J. (2014). Cyanobacterial cellulose synthesis in the light of the photanol concept, *in*: Sharma, N.K. *et al. Cyanobacteria : an economic perspective .* pp. 181-195. dx.doi.org/10.1002/9781118402238.ch11.

Stuut, J.-B. (2014). Subaquatic Dust Deposits, *in*: Knippertz, P.; Stuut, J.-B. *Mineral Dust : A Key Player in the Earth System.* pp. 443-462. hdl.handle.net/10.1007/978-94-017-8978-3_17.

Timmermans, K.R.; Brinkhuis, H. (2014). Zeewier, *in*: *Het beste idee van 2014.* pp. 69-71.

Wernand, M.; Novoa, S.; van der Woerd, H.; Gieskes, W. (2014). A Centuries-long History of Participatory Science in Optical Oceanography: from observation to interpretation of natural water colouring. *Histor. Meereskd. Jahrb. 19/20*: 61-90.

Dissertations

Duijns, S. (2014). Sex-specific foraging : the distributional ecology of a polychaete-eating shorebird. ISBN 978-90-367-7385-0. 169 pp.
Leote, C. (2014). Phosphorus recycling and availability in the western Wadden Sea. *Utrecht Studies in Earth Sciences*, 69. Utrecht University: Utrecht. ISBN 9789062663798. 191 pp.
Salt, L.A. (2014). Process studies of the carbonate system in coastal and ocean environments of the Atlantic Ocean. Rijksuniversiteit Groningen. ISBN 978-90-367-6851-1. 212 pp.
Saraiva, S. (2014). Modelling bivalves in estuaries and coastal areas. Vrije Universiteit Amsterdam: Amsterdam. ISBN 978-94-6203-629-1. 174 pp.
Zee, E.M. van der (2014). Soft-bottom intertidal ecosystems shaped by ecosystem engineers: Consequences for trophic structure. Rijksuniversiteit Groningen. ISBN 978-90-367-6772-9. 170 pp.
Zell, C. (2014). Origin and fate of branched tetraether lipids in river drainage systems : Implications for the use of the MBT/CBT proxy as a continental palaeothermometer in marine sedimentary records. Utrecht University: Utrecht. 201 pp.

Publications for a broad audience

Aken, H.M. van (2014). Grootschalige oceaanstromingen. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 22-27.
Baar, H.J.W. de (2014). De C in de zee. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 14-17.
Boon, J. (2014). Gesleep met organismen over de wereldzeeën. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 72-73.
Brussaard, C.P.D. (2014). Mariene virussen. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 49-53.
Lavaleye, M.S.S. (2014). Extreme habitats. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 43-48.
Maas, L.R.M. (2014). Golven in de diepzee. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 28-33.
Mienis, F. (2014). Oases in de diepzee. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 54-55.
Stigter, H. de; Reichart, G.-J. (2014). Diepzee mijnbouw. *Cah. Bio.- Wet. Maatsch. kwartaal 2*: 67-71.

Other scientific output

Herman, P.M.J.; Beauchard, O.; van Duren, L.A.; Vloemans, M.; Boon, J. (2014). De staat van de Noordzee. Texel. 1-100 pp.
Mills, H.J.; de Leeuw, J.W.; Hinrichs, K.-U.; Inagaki, F.; Kallmeyer, J. (2014). Advancing Sub-Surface Biosphere and Paleoclimate Research MagellanPlus Workshop - 21- 23 August 2014, Seoul (South Korea). *ECORD newsl. 23*: 21.

List of staffmember thats were employed in 2014

DIR
Brinkhuis, Henk
Ridderinkhof, Herman

Blaauboer - Jong de, Carmen
Brink, Richard
Kraanen - Witte, Frida
Lindeboom, Han
Raad de, Ingrid
Slooten van, Cees
Stapel, Johan
Vos de, Arjen
Watmough, Thalia
Ponsoni, Leandro

BGC
Sinninghe Damsté, Jaap

Baas, Marianne
Bale, Nicole
Balzano, Sergio
Bar de, Marijke
Besseling, Marc
Bommel van, Ronald
Booij, Kees
Chivall, David
Donkers, Kevin
Dorhout, Denise
Heinzelmann, Sandra
Hopmans, Ellen
Jonge de, Cindy
Kandiano, Evgenia
Kasper, Sebastian
Kim, Jung-Hyun
Kool, Dorien
Lima Sobrinho de, Rodrigo
Lipsewers, Yvon
Meer van der, Marcel
Mets, Anchelique
Moore, Eli
Ossebaar, Jort
Panoto, Elda
Rampen, Sebastiaan
Reiche, Sophie
Rijpstra, Irene
Schouten, Stefan
Sinke - Schoen, Danielle
Soelen van, Els
Sollai, Martina
Svensson, Elisabeth
Verweij, Monique
Villanueva Alvarez, Laura
Warden, Lisa

BIO
Timmermans, Klaas

Biggs, Tristan
Bleijswijk Tierens Verhagen van, Judith
Bown, Johann
Brussaard, Corina
Clargo, Niki
Crawfurd, Kate
Doggen, Richard
Duyl van, Fleur
Gonzalez, Santiago
Hulten van, Marco
Kooijman - Scholten, Kirsten
Lamers, Alma
Lubsch, Alex
Maat, Douwe
Mojica, Kristina
Mueller, Benjamin
Noordeloos, Anna
O'Connor, Paul
Oosterhuis, Swier
Peperzak, Louis
Ruardij, Piet
Snoek, Josje
Ubels, Selma
Ven van de, Robin
Visch, Wouter
Witte, Harry

FYS
Maas, Leo

Aguiar Gonzalez, Borja
Cimatoribus, Andrea
Duran Matute, Matias
Gerkema, Theo
Haren van, Hans
Heide van der, Roald
Hout van der, Carola
Jong de, Femke
Nauw - Vegt van der, Janine
Novoa Gautier, Stefani
Ober, Sven
Ponsoni, Leandro
Rabitti, Anna
Sassi, Maxi
Steur de, Laura
Stocchi, Paolo
Tiessen, Meinard
Vermeersen, Bert
Vries de, Jurre
Wagemaakers, Eric
Wernand, Marcel

GCO
Reichart, Gert Jan

Baar de, Hein
Bakker, Karel
Boer, Wim
Brummer, Geert-Jan
Cléroux, Caroline
Dijk van, Inge
Does van der, Michelle
Gaever van, Piet
Geerken, Esmee
Gerringa, Loes
Gieles - Witte, Rineke
Greinert, Jens
Korte, Laura
Koster, Bob
Laan, Patrick
Mezger, Eveline
Mienis, Furu
Munday, Christopher
Nooijer de, Lennart
Ooijen van, Jan
Ossebaar, Sharyn
Rijkenberg, Micha
Slagter, Hans
Steinhardt, Juliane
Stigter de, Henko
Stuut, Jan Berend

MEE
Veer van der, Henk

Ballesta Artero, Irene
Bergman, Magda
Bijleveld, Allert
Bodnar, Wanda
Bol - Heijer den, Anneke
Bom, Roeland
Brouwer, Chris
Brugge, Maarten
Camphuijsen, Kees
Cardoso, Joana
Chan, Chi
Compton, Tanya
Dalhuijsen, Kevin
Dekinga, Anne
Dekker, Karsten
Dekker, Rob
Donk van, Susanne
Duijns, Sjoerd
Duineveld, Gerard
Folmer, Eelke
Fouw de, Jim
Gils van, Jan
Goedknegt, Anouk
Hoek van der, Joost
Holthuijsen, Sander
Horn ten, Job
Hout van den, Piet
Jouta, Jeltje
Jung, Sarina
Klunder, Lise
Kok, Eva
Koolhaas, Anita
Lavaleije, Marc
Luttikhuizen, Pieternella
Lyashevska, Olga
Mathot, Kim
McSweeney, Niamh
Meer van der, Jaap
Miguel, Simone
Mosk, Dennis
Oudman, Thomas
Philippart, Katja
Piersma, Theunis
Poszig, Dörte
Raad de, Ingrid
Rakhimberdiev - Karagicheva, Julia
Rakhimberdiev, Eldar
Spaans, Bernard
Tacoma, Marten
Thieltges, David
Veenstra, Monique
Velilla Perdomo, Estefania
Verhoeven, Mo
Walraven van, Lodewijk
Waser, Andreas
Watmough, Thalia
Weerlee van, Evaline
Welsh, Jenni
Witbaard, Rob
Witte, Hans

MON
Hummel, Herman

Avesaath van, Pim
Blok, Daniel Benjamin
Dekker, Angela
Engelberts, Anke
Escaravage, Vincent
Hoesel van, Olaf
Houten van, Wieger
Hummel, Christiaan
Kleine Schaars, Loran
Wijnhoven, Sander

YES
Soetaert, Karline

Brasser, Jurian
Brenner, Heiko
Burdorf, Laurine
Engeland van, Tom
Geelhoed, Jeanine
Gerla, Daan
Guitton le, Marie
Hidalgo Martinez, Silvia
Knuijt, Adri

Meysman, Filip
Oevelen van, Dick
Rijswijk van, Pieter
Seitaj, Dorina
Stratmann, Tanja
Tramper, Anton
Zetsche, Eva Maria

YLA
Houtekamer, Marco

Breugel van, Peter
Maas van der - Maas, Yvonne
Peene, Jan
Sinke, Jan
Zetten van, Cobie

YMA
Herman, Peter

Endt van der, Anneke
Haazen, Lowie
Houte van, Joke
Hulsteijn van - Laven, Elly
Jagt van der, Christine
Megens, Jan
Sinke, Bert
Wisse, Laura

YMM
Stal, Lucas

Bolhuis, Henk
Boschker, Eric
Cardoso, Clara
Confurius - Guns, Veronique
Cretoiu, Silvia
Grego, Michele
Grosse, Julia
Hörnlein, Christine
Kromkamp, Jacco
Linde van der, Lilian
Moerdijk - Poortvliet, Tanja
Vasquez Cardenas, Diana
Vlaming, Jetta
Wijnholds - Vreman, Anita

YRE
Herman, Peter

Balke, Thorsten
Beauchard, Olivier
Berg van den, Aniek
Bouma, Tjeerd
Cornacchia, Loreta
Daggers, Tisja
Dalen van, Jeroen
Hove ten, Alinda
Hu, Zhan
IJzerloo van, Lennart
Jewell, Oliver
Koppel van de, Johan
Kratzer, Isabella
Moons, Simeon
Nieuwhof, Sil
Oteman, Bas
Paoli, Hélene
Rooseboom, Robert
Soelen van, Jos
Soissons, Laura
Wal van der, Daphne
Wielemaker, Annette
Ysebaert, Tom

BIB
Weegen van der, Leonne

Bruining - Porto de, Marlies

CPR
Boon, Jan

Aggenbach, Bert
Barten - Krijgsman, Nelleke
Brinkhuis, Dan
Holthuijsen - Vloemans, Marieke
Leerink, Thomas

DMG
Bruin de, Taco
Koster de, Ronald
Nieuwenhuis, Jan
Richter, Thomas
Sistermans, Wil

FCC
Smit, Peter
Vos, Tjerk

Brouwer, Frans
Davidse, Theo
Gootjes, Jack
Groot, Siem
Keijser, Andrea
Kooijman - Biermans, Hilde
Linden van der, Marcel
Poleacov - Maraiala, Cornelia
Poleij, Carla
Ruissen, Hans
Wernand - Godee, Irene
Witte, Ruud

FM
Trap, Biem

Barten - Krijgsman, Nelleke
Berbee - Bossen, Jantine

Daalder, Ruud
Heerschap, Dick
Lakeman, Robert
Wagemaakers, Diana
Wal van der, Meta

HRM
Vooijs, Peter

Dapper, Rob
Evers, Jolanda
Honkoop, Pieter
Kuip, Theo
Moerbeek - Sikma, Sigrid
Smidt, Marjolijn
Tuinen van, Hans

ICT
Pool, Wim

Derksen, Jan
Epping, Eric
Jonkman, Jan-Thijs
Malschaert, Hans
Nauw, Roland

MRF
Koning, Erica

Haas de, Henk

MTEC
Smit, Marck

MTE
Lenting, Walther

Asjes, Sander
Cluderay, John
Franken, Henk
Groenewegen, Ruud
Laan, Martin
Maarseveen van, Frank

MTI
Heerwaarden van, Johan

Bakker, Roel
Boekel, Herman
Keijzer, Edwin

MTM
Boom, Lorendz

Bakker, Marcel
Blom, Jan
Boersen, Barry
Gieles, Sieme
Grisnich, Piet
Porto de, Harry
Schilling, Jack
Visser de, Jan-Dirk
Wuis, Leon

SML
Greef de, Thomas

Adriaans, Ewout
Alkema, Peter-Roy
Boon, Wim-Jan
Breejen den, Iwan
Coomans, Peter
Daalder, Klaas-Jan
Ellen, John
Feij, Bram
Fockema Andreae, Alle
Haaren van, Joep
Heesemans, Martijn
Heide van der, Roel
Hiemstra, Fred
Jourdan, Mildred
Katwijk van, Rik
Kuijt, Pieter
Lips, Sietske
Maas, Sjaak
Moerland, Leon
Puijman, Bert
Seepma, Jaap
Stevens, Cor
Vermeulen, Gert
Vries de, Hein
Vries de, Martin
Zuidweg, Johan

DIR
Blaauboer - Jong de, Carmen
Brink, Richard
Brinkhuis, Henk
Kraanen - Witte, Frida
Lindeboom, Han
Raad de, Ingrid
Ridderinkhof, Herman
Slooten van, Cees
Stapel, Johan
Vos de, Arjen
Watmough, Thalia
Ponsoni, Leandro

BGC
Baas, Marianne
Bale, Nicole
Balzano, Sergio
Bar de, Marijke
Besseling, Marc
Bommel van, Ronald
Booij, Kees
Chivall, David

Donkers, Kevin
Dorhout, Denise
Heinzelmann, Sandra
Hopmans, Ellen
Jonge de, Cindy
Kandiano, Evgenia
Kasper, Sebastian
Kim, Jung
Kool, Dorien
Lima Sobrinho de, Rodrigo
Lipsewers, Yvon
Meer van der, Marcel
Mets, Anchelique
Moore, Eli
Ossebaar, Jort
Panoto, Elda
Rampen, Sebastiaan
Reiche, Sophie
Rijpstra, Irene
Schouten, Stefan
Sinke - Schoen, Danielle
Sinninghe Damsté, Jaap
Soelen van, Els
Sollai, Martina
Svensson, Elisabeth
Verweij, Monique
Villanueva Alvarez, Laura
Warden, Lisa

BIO
Biggs, Tristan
Bleijswijk Tierens Verhagen van, Judith
Bown, Johann
Brussaard, Corina
Clargo, Niki
Crawfurd, Kate
Doggen, Richard
Duyl van, Fleur
Gonzalez, Santiago
Hulten van, Marco
Kooijman - Scholten, Kirsten
Lamers, Alma
Lubsch, Alex
Maat, Douwe
Mojica, Kristina
Mueller, Benjamin
Noordeloos, Anna
O'Connor, Paul
Oosterhuis, Swier
Peperzak, Louis
Ruardij, Piet
Snoek, Josje
Timmermans, Klaas
Ubels, Selma
Ven van de, Robin
Visch, Wouter
Witte, Harry

FYS
Aguiar Gonzalez, Borja
Cimatoribus, Andrea
Duran Matute, Matias
Gerkema, Theo
Haren van, Hans
Heide van der, Roald
Hout van der, Carola
Jong de, Femke
Maas, Leo
Nauw - Vegt van der, Janine
Novoa Gautier, Stefani
Ober, Sven
Ponsoni, Leandro
Rabitti, Anna
Sassi, Maxi
Steur de, Laura
Stocchi, Paolo
Tiessen, Meinard
Vermeersen, Bert
Vries de, Jurre
Wagemaakers, Eric
Wernand, Marcel

GCO
Baar de, Hein
Bakker, Karel
Boer, Wim
Brummer, Geert-Jan
Cléroux, Caroline
Dijk van, Inge
Does van der, Michelle
Gaever van, Piet
Geerken, Esmee
Gerringa, Loes
Gieles - Witte, Rineke
Greinert, Jens
Korte, Laura
Koster, Bob
Laan, Patrick
Mezger, Eveline
Mienis, Furu
Munday, Christopher
Nooijer de, Lennart
Ooijen van, Jan
Ossebaar, Sharyn
Reichart, Gert Jan
Rijkenberg, Micha
Slagter, Hans
Steinhardt, Juliane
Stigter de, Henko
Stuut, Jan Berend

MEE
Ballesta Artero, Irene
Bergman, Magda
Bijleveld, Allert
Bodnar, Wanda
Bol - Heijer den, Anneke

Bom, Roeland
Brouwer, Chris
Brugge, Maarten
Camphuijsen, Kees
Cardoso, Joana
Chan, Chi
Compton, Tanya
Dalhuijsen, Kevin
Dekinga, Anne
Dekker, Karsten
Dekker, Rob
Donk van, Susanne
Duijns, Sjoerd
Duineveld, Gerard
Folmer, Eelke
Fouw de, Jim
Gils van, Jan
Goedknegt, Anouk
Hoek van der, Joost
Holthuijsen, Sander
Horn ten, Job
Hout van den, Piet
Jouta, Jeltje
Jung, Sarina
Klunder, Lise
Kok, Eva
Koolhaas, Anita
Lavaleije, Marc
Luttikhuizen, Pieternella
Lyashevska, Olga
Mathot, Kim
McSweeney, Niamh
Meer van der, Jaap
Miguel, Simone
Mosk, Dennis
Oudman, Thomas
Philippart, Katja
Piersma, Theunis
Poszig, Dörte
Raad de, Ingrid
Rakhimberdiev - Karagicheva, Julia
Rakhimberdiev, Eldar
Spaans, Bernard
Tacoma, Marten
Thieltges, David
Veenstra, Monique
Veer van der, Henk
Velilla Perdomo, Estefania
Verhoeven, Mo
Walraven van, Lodewijk
Waser, Andreas
Watmough, Thalia
Weerlee van, Evaline
Welsh, Jenni
Witbaard, Rob
Witte, Hans

MON
Avesaath van, Pim
Blok, Daniel Benjamin
Dekker, Angela
Engelberts, Anke
Escaravage, Vincent
Hoesel van, Olaf
Houten van, Wieger
Hummel, Christiaan
Hummel, Herman
Kleine Schaars, Loran
Wijnhoven, Sander

YES
Brasser, Jurian
Brenner, Heiko
Burdorf, Laurine
Engeland van, Tom
Geelhoed, Jeanine
Gerla, Daan
Guitton le, Marie
Hidalgo Martinez, Silvia
Knuijt, Adri
Meysman, Filip
Oevelen van, Dick
Rijswijk van, Pieter
Seitaj, Dorina
Soetaert, Karline
Stratmann, Tanja
Tramper, Anton
Zetsche, Eva Maria

YLA
Breugel van, Peter
Houtekamer, Marco
Maas van der - Maas, Yvonne
Peene, Jan
Sinke, Jan
Zetten van, Cobie

YMA
Endt van der, Anneke
Haazen, Lowie
Herman, Peter
Houte van, Joke
Hulsteijn van - Laven, Elly
Jagt van der, Christine
Megens, Jan
Sinke, Bert
Wisse, Laura

YMM
Bolhuis, Henk
Boschker, Eric
Cardoso, Clara
Confurius - Guns, Veronique
Cretoiu, Silvia
Grego, Michele
Grosse, Julia
Hörnlein, Christine

Kromkamp, Jacco
Linde van der, Lilian
Moerdijk - Poortvliet, Tanja
Stal, Lucas
Vasquez Cardenas, Diana
Vlaming, Jetta
Wijnholds - Vreman, Anita

YRE
Balke, Thorsten
Beauchard, Olivier
Berg van den, Aniek
Bouma, Tjeerd
Cornacchia, Loreta
Daggers, Tisja
Dalen van, Jeroen
Hove ten, Alinda
Hu, Zhan
IJzerloo van, Lennart
Jewell, Oliver
Koppel van de, Johan
Kratzer, Isabella
Moons, Simeon
Nieuwhof, Sil
Oteman, Bas
Paoli, Hélene
Rooseboom, Robert
Soelen van, Jos
Soissons, Laura
Wal van der, Daphne
Wielemaker, Annette
Ysebaert, Tom

BIB
Bruining - Porto de, Marlies
Weegen van der, Leonne

CPR
Aggenbach, Bert
Barten - Krijgsman, Nelleke
Boon, Jan
Brinkhuis, Dan
Holthuijsen - Vloemans, Marieke
Leerink, Thomas

DMG
Bruin de, Taco
Koster de, Ronald
Nieuwenhuis, Jan
Richter, Thomas
Sistermans, Wil

FCC
Brouwer, Frans
Davidse, Theo
Gootjes, Jack
Groot, Siem
Keijser, Andrea
Kooijman - Biermans, Hilde
Linden van der, Marcel
Poleacov - Maraiala, Cornelia
Poleij, Carla
Ruissen, Hans
Smit, Peter
Vos, Tjerk
Wernand - Godee, Irene
Witte, Ruud

FM
Barten - Krijgsman, Nelleke
Berbee - Bossen, Jantine
Daalder, Ruud
Heerschap, Dick
Lakeman, Robert
Trap, Biem
Wagemaakers, Diana
Wal van der, Meta

HRM
Dapper, Rob
Evers, Jolanda
Honkoop, Pieter
Kuip, Theo
Moerbeek - Sikma, Sigrid
Smidt, Marjolijn
Tuinen van, Hans
Vooijs, Peter

ICT
Derksen, Jan
Epping, Eric
Jonkman, Jan-Thijs
Malschaert, Hans
Nauw, Roland
Pool, Wim

MRF
Haas de, Henk
Koning, Erica

MTEC
Smit, Marck
MTE
Asjes, Sander
Cluderay, John
Franken, Henk
Groenewegen, Ruud
Laan, Martin
Lenting, Walther
Maarseveen van, Frank
MTI
Bakker, Roel
Boekel, Herman
Heerwaarden van, Johan
Keijzer, Edwin
MTM
Bakker, Marcel

Blom, Jan
Boersen, Barry
Boom, Lorendz
Gieles, Sieme
Grisnich, Piet
Porto de, Harry
Schilling, Jack
Visser de, Jan-Dirk
Wuis, Leon

SML
Adriaans, Ewout
Alkema, Peter-Roy
Boon, Wim-Jan
Breejen den, Iwan
Coomans, Peter
Daalder, Klaas-Jan
Ellen, John
Feij, Bram
Fockema Andreae, Alle
Greef de, Thomas
Haaren van, Joep
Heesemans, Martijn
Heide van der, Roel
Hiemstra, Fred
Jourdan, Mildred
Katwijk van, Rik
Kuijt, Pieter
Lips, Sietske
Maas, Sjaak
Moerland, Leon
Puijman, Bert
Seepma, Jaap
Stevens, Cor
Vermeulen, Gert
Vries de, Hein
Vries de, Martin
Zuidweg, Johan

Colloquia

15 January. **Sabine Gollner** (*Senckenberg Institute Wilhelmshaven*). Volcanoes of the deep - destruction and recovery of hydrothermal vent communities after natural and human induced disturbances.
30 January. **Douwe Maat (NIOZ, BIO).** Ecophysiological aspects of algal virus-host interactions in a changing ocean.
5 February. **Jasper Donkers** (*Utrecht University*) The influence of mussel beds on hydrodynamics.
6 February. **Kees van Zandwijk** (*Heerema Contractors*). Aegir: a new deep-sea exploration vessel.
13 February. **Micha Rijkenberg** (NIO GCO). Finding a needle in a haystack: looking for iron in the western Atlantic Ocean, the Mediterranean Sea and the Black Sea.
20 February. **Marc Lavalije** (NIOZ, MEE). Baited experiments in the deep-sea.
27 February. **Maarten Kleinhans** (*Utrecht University*). River and delta morphodynamics.
6 March. **Johan van Heerwaarden & Walther Lenting** (NIOZ, MTI and MTE). KM3Net, Temperature calibration bath and LabVIEW.
13 March. **Mark Bertness** (*Brown University)*. Is salt marsh die-off a deterministic state in a predator depleted ocean?
27 March. **Lesley Salt** (NIOZ, BIO). Process studies of the carbonate system in coastal and ocean environments of the Atlantic Ocean.
10 April. **Raja Ganeshram** (*University of Edinburgh*). What controls Si limitation in the ocean: the Fe connection.
11 April. **Claudia Zell** (NIOZ, BGC). Climate history derived from fatty acids.
17 April. **Sabine Lengger** (University of Bristol). Toxicity effects and profiling of oil derived compounds in aquatic environments.
24 April. **Jennifer Durden** (*NOC Southampton*). Life and life traces on the abyssal plain.
7 May. **David Thieltges & Jan van Gils** (NIOZ, MEE) Crossing borders - from temporary to permanent positions and from predators to parasites.
15 May. **Catarina** Ferreira **da Silva (NIOZ, BIO).** Oxygen concentration affects Coral calcification.
22 May. **Ann Vanreusel** (*Gent University*). An integrative approach of meiofauna research in reduced environments of the deep sea.
28 May. **Sven Ihnken** (NIOZ, MM). CO_2, light, and photosynthesis - how algae deal with ocean acidification.
12 June. **Kristina Mojica** (NIOZ, BIO). Vertical stratification - consequences for marine phytoplankton and food web dynamics.
19 June. **Frans Brouwer** (NIOZ, FCC). Planning & Control bij het NIOZ - the next level.
26 June. **Andy Kwarteng** (*Sultan Qaboos University, Oman*). Barr Al-Hikman: a modern carbonate-evaporite system and outcrop analogue in Oman.
27 June. **Kenneth Rijsdijk** (*Naturalis*)and **Carol Cotteril** (*British Antarctic Survey*). Sea level change forcing evolution? Towards and interdisciplinary approach.
2 July. **Johan Stapel (**CNSI). The new Caribbean Netherlands Science Institute.
3 July. **Katja Guilini** (*Gent University*). Video observations and sedimentology of the deep-sea floor.
12 September. **Walter Munk** (*Scripps Institute of Oceanography).* A late drift of a physical oceanographer into ocean acoustics.
18 September. **Sofia Saraiva** (*NIOZ, MEE).* Modelling bivalves in estuaries and coastal areas.
30 October. **Henk Bolhuis** (*NIOZ, YMM).* Systems microbiology of coastal microbial mats.
6 November. **Piet Ruardij** (*NIOZ, BIO)* Modelling coastal ecosystems: consequences of increasing spatial resolution for process descriptions.
20 November. **Andreas Sterl** (*KNMI).* Argo: achievements and developments.
27 November. **Henry Hooghiemstra** (*University of Amsterdam).* The continental pollen signal in offshore NW-African marine sediments: sources, transport, sinks, and Pleistocene vegetation change.
4 December. **Lars Lund-Hansen** (*Aarhus University).* Removal of snow cover inhibits spring growth of Arctic ice algae through physiological and behavioral effects.
10 December. **Jorg Overmann** (*L-M University Munich).* Decoding ecological niches and biotic interactions of bacteria in the environment.

11 December. **Catarina Leote** (*NIOZ, GCO).* Phosphorus recycling and availability in the western Wadden Sea.
16 December. **Ulf Gräwe** (*IOW Warnemünde).* From the North Atlantic to the residual circulation in the Wadden Sea - a multi-nested model approach.
18 December. **Sjoerd Duijns** (*NIOZ, MEE).* Sex-specific foraging: the distributional ecology of a polychaete-eating shorebird.

Courses held at NIOZ or organised elsewhere by NIOZ staff

BSc/MSc-course “N-isotope systems”. In collaboration with Jacobs University, Bremen (November). Contact person G.J.A. Brummer.

BSc-course Marine Biology & Oceanography, Univ. Groningen, contact person prof. dr. K.R. Timmermans, 3 weeks April. BSc-course ‘Marine Biology & Oceanography’, Univ. Groningen (RUG). Two week practical at NIOZ.

Global Change and Coastal Hazard Mitigation, Annual MSc course at the University of Antwerp, co-organizer, T.J. Bouma in collaboration with Prof. S. Temmerman.

Inferring diet information from stable isotope data using isotope mixing models. D. van Oevelen led a 2 day workshop for an international group of 30 PhD students and post-docs, Ghent University, 25-26 March. Course organizer: Marleen de Troch.

M.Sc.-course MarineMasters: How does the sea work: 2 weeks July, contact person dr. H. de Stigter.

M.Sc.-course Microbial Ecology, Univ. Amsterdam (UvA). Contact person prof. dr. C.P.D. Brussaard

Marine Microbiology for ‘Marine Sciences-3 course’, Univ. Utrecht. Contact person prof. dr. A. Sluijs.

Marine Sciences II: Sandy and Muddy Shores. Gollner, S. Utrecht University, September 29-30, 2 October. Student course including lectures, excursion to Zandmotor, and laboratory work on meiofauna; ~70 students.

Marine Sciences III: Deep-sea biology and hydrothermal vents. Gollner, S., Utrecht University, 8-9 December. Student course including lectures and werkcollege; ~60 students.

MSc-course “Biogeochemical Cycling”. In collaboration with VU-Amsterdam. Contact person G.J.A. Brummer.

NIOZ Marine Masters course “Exploring the western Wadden Sea”. Contact persons dr. H.C. de Stigter, prof. dr. H. Ridderinkhof

PhD-course “How to give a good talk”, L. Villanueva, 4 November.

PhD-course “How to write a scientific paper”. Contact person G.J.A. Brummer.

Spatial Ecology course for PhD students, Dorwerth, 16-20 March. Main organized: van de Koppel, J. Course organized under the auspicien of the Graduate School for Production Ecology and Resource Conservation (PE&RC).
SCOPE OF THE COURSE

Including space in ecological studies has become increasingly important in the past decades. Recent studies reveal that ecological processes can generate striking spatial complexity and that the movement and distribution of organisms interact with spatial environmental patterns. This course focuses on concepts such as spatial self-organization, scale-free movement, and biophysical interactions at multiple scales. Furthermore, modern techniques to quantify plant and animal movement, analyze animal movement strategies, and model the implications of spatial self-organization in an ecosystem using a relatively simple modelling approach will be introduced.

Cruise Reports

Bale, N.J. (2014). Cruise report HCC cruise: R/V Pelagia 64PE393, 26th August – 21st September 2014 . NIOZ: Texel. 77 pp.

Duyl, F.C. van (2014). Spatial and species specific variations in the diet of sponges Preliminary results 3.1. Sponges, macro algae and nutrients, *in*: van Beek, I.J.M. *et al. Saba Bank research expedition 2013 - Progress Report.* pp. 11-14.

Haren, H. van (2014). Cruise report KM3NeT14: R/V Pelagia cruise 64PE389, 06-11 June 2014. NIOZ: Texel. 21 pp.

Kromkamp, J.C. (2014). Shipboard rapport RWS-Zirfaea cruise 17-19 juni 2014. NIOZ: Yerseke. 12 pp.

Finalized data sets

Bakker, K. Data from the expedition ARK-XXVII/3, http://doi.pangaea.de/10.1594/PANGAEA.834081

Bakker, K. Data from the expedition ARK-XXVII/3, http://doi.pangaea.de/10.1594/PANGAEA.834084

External functions

P. van Avesaath
Working Group Leader of the ESF COST Action EMBOS European Marine Biodiversity Observatory System
Representative of NIOZ as grant holder of the ESF COST Action EMBOS European Marine Biodiversity Observatory System
Co-founder of the MarBEF+ Association under Dutch Law, with its seat at NIOZ.

H. Bolhuis
External Examinator Hogeschool Zeeland, University of applied sciences.

K. Booij
Member of the ICES Marine Chemistry Working Group.

T. Bouma
Co-organizer HYTECH PhD-summerschool, Lyon
NIOZ project leader Be Safe project
NIOZ project leader HYTECH

NIOZ project leader Yellow River Delta project
NIOZ project leader Pilot study sediment dynamics
Honorary Professor at the Groningen University
Hired for scientific quality control at HZ University of applied sciences
PhD opponent Jantsje M. van Loon-Steensma, Wageningen University, 8 October
PhD opponent Chen Wang, University of Antwerp, Belgium, 21 October.

H. Brinkhuis
Chairman LPP Foundation
Board member Molengraaff fonds
Member of the ERICON-AB Science Advisory Panel (2010 -)
Member Sci Com Waddenacademie
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.

T. F. de Bruin
Chair - Netherlands National Oceanographic Data Committee (NL-NODC)
IODE national coordinator for data management
Chair - Workshop on ICES Data Guidelines (WKIDG)
Member – ICES Working Group on Data and Information Management (ICES-WGDIM)
Member - OceanSITES Data Management Team
Member - Steering Committee of the Marine Metadata Interoperability (MMI) project
Member - Southern Ocean Observing System (SOOS) Data Management Sub-Committee
Member – SCAR Standing Committee on Antarctic Data Management (SCADM)
Member Advisory Group Norwegian Marine Data Centre (NMDC) project.

G.-J.A. Brummer
Extraordinary Professor at the VU University Amsterdam
Member NWO-ALW Open Round proposal-review committee
Member NWO-ALW gebruikersadviesgroep verankerde instrumentatie (GAG-VI)
Member organizing committee “Foraminifera and nannofossils through time; qualification and quantification”, The Micropaleontological Society, Foraminifera and Nannofossil Groups Joint Meeting 2014, 22-25 June.

C.P.D. Brussaard
President of the International Society for Viruses of Microorganisms (ISVM) from October 2014
Vice President of the International Society for Viruses of Microorganisms (ISVM) till October 2014
Secretary of the Scientific Committee on Oceanic Research (SCOR) from October 2014
Vice President of the Scientific Committee on Oceanic Research (SCOR) till October 2014
Editor FEMS Microbiology Reviews
Member Netherlands Polar Committee
Member Raad Aard- en Levenswetenschappen KNAW
National member of the International Association for Biological Oceanography (IABO)
Chair of Dutch SCOR Committee
Chair Steering Committee of the Aquatic Virus Workshop (AVW)
Editorial Board Position Member of the Phycological Society of America
Editor Communicative & Integrative Biology.

G.C. Cadée
Editor Natura (KNNV)
Associate editor ICHNOS
Bestuurslid Historie van de Oceanografie Club (HOC).

C.J. Camphuysen
Elected board member and European representative in the World Seabird Union (2013-)
Co-organiser of the World Seabird Group Conference, Cape Town (2015)
Member scientific Committee of the World Seabird Group Conference, Cape Town (2015)
Member editorial board ICES Journal of Marine Science, 2013-present
Member editorial board, Ardea 1996-2005, 2014-present
Member editorial board Seabird, 2010-present
Scientific advice, Ministry of Transport and Public Works (oil pollution)
Principal investigator and chief scientist Programme Biodiversité Oil et Gaz, IMROP, Nouadhibou, Mauritania, 2012-present
Member of the ICES working group on Seabird Ecology (until 2014)
Member of the ICES working group WKMEDS II - impacts of seabird predation on discard survival task group (2014-present).

F.C. van Duyl
Board Member Treub MIJ
Appointed reviewer International Foundation for Science (IFS)
Board Member AcroporaNet
Dutch representative Marine Board European Scientific Diving Panel.

V. Escaravage
Member of the advisory committee ‘Management and development of modelling tools for the monitoring of water quality’ (Deltares)
Member of the Steering Committee Pulse trawling (ministry of economic affairs).

T. Gerkema
Member of NCK Program Comitee.

L.J.A. Gerringa
Member of NPC - Netherlands Polar Committee.

J. Greinert
Guest professor in Marine Geology, Ghent University, Belgium.

H. de Haas
Member NWO-ALW gebruikersadviesgroep bodembemonsteringssystemen en seismiek (GAG-BSS).

J.J.M. van Haren
Member Institutional Board ANTARES neutrino telescope
Member Strategic Board cubic kilometer neutrino telescope KM3NeT-PP/SC
Chairman “ALW gebruikersadviesgroep Verankerde Instrumentatie”
Chairman “ALW-GAGvoorzittersplus”
Professeur Invité, École Centrale de Lyon, France, 12 May – 4 June.

S. Heinzelmann
Discussion leader at Gordon Research Conference on Marine Microbes, Sacramento, USA, 8 -13 June.

P.M.J. Herman
Honorary Professor at Radboud University Nijmegen
Member CMW (Commissie Monitoring Westerschelde)
Member NWO/SRON User commission
Member Scientific Advisory Board Ifremer
Member science advisory commission INBO, Brussel
Member expert advisory commission Lifewatch, VLIZ, Ostend
Member of the advisory board VLIZ, Ostend
Advisor for visitation IWWR, Nijmegen
Member of the steering committee modeling HPP at the Vlaams-Nederlandse Schelde Commissie
Member science advisory commission Mosselwad (Waddenfonds project)
Promotor doctoral thesis of Christian Schwarz, Lucy Gwen Gillis, Laura Govers at Radboud University
Member of the manuscript committee and promotion committee of Miguel de Lucas (Delft University of Technology), Eric Horstman (University of Twente), Els van der Zee (Groningen University), Peter Paalvast (Radboud University)
Member of the external international advisory committee for the project EGIPUS of the Flemish government (verdieping/aanpassing Zeeschelde)
Member programme committee NCK (Nederlands Centrum Kustonderzoek)
Member of the writing team for the project BONUS-Noordzee
Member of the writing team EASAC sustainable marine exploitation
Member of the organizing committee Noordzeedagen

Member of the Scientific Board and convener ecology conference 'Deltas in times of climate change'
Member ‘EU-Noordzee-kernteam’ for consultation Rijkswaterstaat-research institutions
Reviewer for Delta program Southwest Delta, participant consultation review national Delta Programme
External reviewer of report on “effecten garnalenvisserij” Wadden academy.

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 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
Doctoral examiner PhD defense Dr. Ir. Peter Paalvast, Radboud University Nijmegen (title Ecological studies in a man-made estuarine environment, the port of Rotterdam), Nijmegen, 17 April.

J.W. de Leeuw
Guest professor Faculty Geosciences, Utrecht University
Guest professor Faculty Biology, Utrecht University
Professorship in Geochemistry University of Cataluna
Member of the Royal Dutch Academy of Sciences (KNAW)
Geochemical Fellow ACS
Member Independent Scientific Advisory Board (ISAB) INSITE Program.

F.A. Koning
Chair Ocean Facilities Exchange Group (OFEG)
Member International Research Ship Operators (IRSO)
Member European Research Vessel Operators (ERVO)
Member NERC Cruise Programme Review Group (CPRG)
Member NERC Marine Facilities Advisory Group (MFAG).

J. van de Koppel
Main organizer of the PHD course “spatial ecology”
Main organizer of the Lorentz center workshop ”Spatio-temporal dynamics in Ecology”
Project leader Mosselwad Project
Project leader Waddensleutels Project
Project leader “Land uit zee” project: modelling vegetation development following depoldering of the Hedwige and Prosperpolder (HPP project)
Honorary Professor at the Groningen University.

B. Koster
Member NWO-ALW gebruikersadviesgroep bodembemonsteringssystemen en seismiek (GAG-BSS).

J. Kromkamp
Member international board Group for Primary Production (GAP)
Member OSPAR foodweb workgroup FW2
Member Wetenschapelijke Raad Zeeland (WRZ)
Member Kerngroep Kennis Netwerk Delta Water (KNDW).

L.R.M. Maas
Professor Ocean wave dynamics – IMAU, Utrecht University
Lecture series on Wave Attractors (Feb-June)
Opposition at PhD defence D. LeBars, Dynamics and estimation of the Agulhas leakage at Utrecht University, 12 March
Opposition at PhD defence I. Manola, A modeling study of teleconnections and their tropical sources at Utrecht University, 22 September
Opposition at PhD defence A. Naffie, Formation and long-term evolution of shoreface-connected sand ridges: Modeling the effects of sand extraction and sea level rise at Utrecht University, 3 December.

J. van der Meer
Professor in Marine Population Ecology at the Institute for Ecological Sciences at the VU University Amsterdam
Editor of ISRN Oceanography
Guest editor of special DEB issue, Journal of Sea Research
Chairman of the Netherlands Annual Ecology Meeting organization committee
Member of the Management Board of MARES (Doctoral Programme on Marine Ecosystem Health and Conservation)
Member of the advisory board Natuurbehoud of the Prins Bernhard Cultuurfonds
Member of the ICES working group WKVHES.

F.J.R. Meysman
Editor Journal of Marine Research
Assistant professor (10% ZAP), Vrije Universiteit Brussel (Belgium)
Guest professor, Ghent University (Belgium)
Coordinator Darwin project 'HYPOXIA Grevelingen'
Membership PhD committee: Arthur Capet, Liege University, Belgium, 15 March, Trent Marwick, KU Leuven, Belgium, 27 November.

F. Mienis
Session chair ASLO 2014, Honolulu, USA, 23- 28 February
Guest Editor Deep Sea Research Special Issue on Biology and Geology of Deep-Sea Coral Ecosystems, Proceedings ISDSC 5.

L.J. de Nooijer
Guest Senior scientist at the Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany.

L. Peperzak
Member: ICES/IOC/IMO Working Group on Ballast and Other Ship Vectors
Member: Global TestNet (of ballast water test facilities).

G.J. Reichart
Professor 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)
Lecturer Urbino Summer School, Urbino, Italy, 10-30 July
Program Chair European Geosciences Union 2014
Auditor European Geosciences Union finances 2014-2015
Evaluation committee Rubicon NWO-ALW
Jury NWO-STW technology program.

T. Richter
Member OceanSITES Data Management Team.

M.J.A. Rijkenberg
Member of NPC - Netherlands Polar Committee
Member of the international GEOTRACES Scientific Steering Committee
Associate member of the SCOR workgroup 139 on organic ligands.

S. Schouten
Part-time professor Molecular Palaeontology, Faculty of Geosciences, Utrecht University
Associate editor Organic Geochemistry
Member of the Netherlands Integrated Ocean Drilling Program Committee
Member of the Royal Dutch Academy of Sciences (KNAW).

J.S. Sinninghe Damsté
Part-time professor Organic Geochemistry, Faculty of Geosciences, Utrecht University
Member of the Royal Dutch Academy of Arts and Sciences (KNAW)
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
Director of Netherlands Earth System Science Centre.

M.G. Smit
Member Ocean Fleet Exchange Group – Technology section
Member NWO Instituut Platform Kennis Benutting
Member NWO Technologie Overleg
Editor Hydro International journal.

K. Soetaert
Member of the FWO scientific commission 'bio' (Belgium)
Member of the NWO VIDI commission
Guest professor, 10 %, Ghent University (Belgium)
Associate editor journal of statistical software
Membership PhD committee (promotor): Christina Mueller, Utrecht University, 24 February.

L. Stal
Coordinator EU project MaCuMBA
Editor Plos-One
Editorial board member ISME Journal
Editorial board member Frontiers of Microbiology
Steering committee EMBRC (European Marine Biology Resource Center) (NL left EMBRC in the course of 2014).

H.C. de Stigter
Chairman NWO-ALW gebruikersadviesgroep bodembemonsteringssystemen en seismiek (GAG-BSS).

J.-B.W. Stuut
Senior scientist at MARUM – Center for Marine Environmental Sciences, University of Bremen, Germany
Member of International Society for Aeolian Research board
Associate editor Aeolian Research
Advisory editor Netherlands Journal of Geosciences
Member Netherlands IODP Committee
Member INQUA-Netherlands board
Member scientific advisory board NIOZ Ballastwater project
National representative IMAGES.

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

K.R. Timmermans
Guest editor Marine Chemistry: Cycles of metals and carbon in the oceans
Member of Advisory Committee REEPON, AWI, Germany
Member management committee COST action: Advancing knowledge on seaweed growth and development.

L. Villanueva
Member of the editorial board of International Microbiology Journal.

D. van der Wal

Member 'Flexibel Stortoverleg' (subgroup Technical Schelde Committee)
Committee member NWO/ALW Open programme (Oct)
WP leader Remote Sensing, and coordinator for NIOZ, EU FAST project
Project leader NWO-Ruimteonderzoek – Benthic diatoms as indicators for ecosystem structuring
Project leader NWO-Ruimteonderzoek - Consequences of global change for ecosystem engineering effects of shellfish.

Tj.C.E. van Weering (Sci. Emeritus)
Member Programme Committee to the Scientific Programme Indonesia – Netherlands (SPIN) of the Royal Netherlands Academy of Arts and Sciences (KNAW)
Member steering committee COCARDE/ESF
Advisor NWO-NIOZ regarding Caribbean Netherlands Science Institute at St. Eustatius
Member program committee Netherlands Caribbean programme (NWO)
Guest Editor Deep Sea Research Special Issue on Biology and Geology of Deep-Sea Coral Ecosystems, Proceedings ISDSC 5.

M.R. Wernand
Program committee member 4th EOS Topical Meeting on Blue Photonics® - Optics in the Sea
External Examiner in Examining Committee of Prof. Dr. Ing. W. Verhoef (Promoter), Dr. ir. Mhd. S. Salama (Co-promoter) for PhD Proposal by Behnaz Arabi, Using coupled water – atmosphere radiative transfer models for water quality monitoring over the Wadden Sea, submitted to the Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente
Assessment Board member Univ. Twente. MSc Teshale Tadesse Danbara,Deriving water quality indicators of Lake Tana, Ethiopia, from Landsat-8
Assessment Board member Univ. Twente. MSc Edika Stephen Masisi, Analyzing spatial and temporal variations of the eutrophication status of Lake Victoria, Tanzania
Assessment Board member Univ . Twente. MSc Xin Su, Multi-sensor SSC retrieval, a case study over the Yangtze River estuary
EARSEL representative.

E. Zetsche
Guest Editor for a special issue: Aquatic Particles in the journal “Marine Chemistry”.

Guest scientists

Brand, E., Utrecht University, 1 October-31 December.
Durden, J. National Oceanography Centre, U.K. 14-25 April.
El Ouahabi, A. 1 September-8 December.
Genuário, D.B., Biólogo-ESALQ/USP Doutorando-CENA/USP, Brasil, 1 January-28 February.
Gommeaux, M., Université de Reims Champagne-Ardenne, UFR Sciences, Département des sciences de la Terre, Reims, France, several occasions throughout 2014.
Grossi, V., University of Lyon, France, 14-27 September.
Guerreiro, C., Instituto Dom Luiz, University of Lisbon, Portugal, 23 October-11 November
Han, Q., Yantai Institute for Coastal Zone Research (YIC-CAS), Yantai, China, 21 November-14 December.

Husson, B., Ifremer, France, 3-14 November.
Kloosterziel, R., Hawaii, SOEST, 1 February-23 December.
Kunihiro, T., Center for Marine Environmental Studies (CMES), Ehime University, Ehime, Japan, 1 January-30 August.
Li, B., Yantai Institute for Coastal Zone Research (YIC-CAS), Yantai, China, 15 August-15 October.
Luo, Y., Dalhousie University, Halifax, Canada , January.
Montserrat Trotsenburg, F., Vrije Universiteit Brussel, Belgium, 1 January-31 December.
Ortulan, C., Instituto Oceanográfico-USP, 28 August-31 December.
Quaijtaal, W., Universiteit Gent, Belgium, 3-21 February, 18 August-20 September.
Van der Woerd, H., IVM, Free University, Amsterdam, 2 days a month.
Weber Y., University of Basel, Switzerland, 20-31 January, 21-29 July.
Zetsche, E., Vrije Universiteit Brussel, Belgium, 1 January-1 August.

Students

Afanasyeva, A., Hogeschool Zeeland, University of applied sciences, 1 February-30 July.
Ahn, A-C., Université de Liège, Belgium, 1 February-25 August.
Beckebanze, F., Utrecht University IMAU and Math.
Bedolfe, S. RUG, Groningen, 1 April-31 December.
Beerda, J., Hanzehogeschool Groningen, 1 January-30 September.
Belcijan, K., University of Ljubljana, Slovenia, 1 July- 30 September.
Berrevoets M., Hogeschool Rotterdam, 24 November-31 December.
Bleumink, G. Utrecht University, May-June.
Boeve, R., Hogeschool Rotterdam, 1 September-31 December.
Brand, E., Utrecht University, IMAU Fys.Geografie.
Cartiere, R. RUG, Groningen, 1 June-15 July.
Cleirec, B. VAR, Toulon.
Cocozza, A., OTTIMA project. 1 July-31 December.
Dairain, A., UPMC France, 1 February-30 June.
De Bar, M. Utrecht University, January-September.
De Boer, J., Rotterdam Mainport University of Applied Sciences. 1 August-31 December.
De Groot, L., Hogeschool van Hall-Larenstein, Leeuwarden, 16 August-31 December.
De Ruiter, G., Zadkine ROC, Rotterdam, 1 January-21 June.
Dijkstra, O., Hogeschool Leiden, 1 September-31 December.
Doveren, F.A.J., University of Amsterdam, 14 July–31 December.
Fillol Homs, M., Universitat de Girona, Spain, 17 March-11 June.
Geerken, E. VU University, Amsterdam, February-June.
Geerts, University of Antwerp, Belgium, 31 December-1 February.
Habicht, M.H., University of Massachusetts Amherst, USA, 1-23 December.
Havermans, J., University Groningen, Groningen, 15 June-31 December.
Hoogeboom, J., Hogeschool CAH Vilentum, Almere, 7 May-17 October.

Huurdeman, L., ROC Amsterdam. 1 May-31 December.
Inglis, G., University of Bristol, 15-22 April.
Jones Quartey, PhD student, University of Ghana, Ghana, 1-7 October
Klip, N., Hogeschool Rotterdam Engineering en toegepaste wetenschap, 1 January-28 January.
Klootwijk, A. Utrecht University, February-July.
Koenen, I., Berufskolleg Hilden, Hilden, 5 July-5 October.
Konstantinidou, E., Utrecht University, 17 March–4 August.
Koops, J., MSc student, University of Amsterdam, Amsterdam, 1 April-30 May.
Koppelle, S., University of Amsterdam (UvA), 1 March-1 November.
Kruseman, A., Utrecht University IMAU and Math.
Kusen, P., Berufskolleg Hilden, Hilden, 5 July-5 October.
Lattaud, J., 1 September-31 December
Liddell, C. Wageningen Univertsity, Wageningen, 1-20 January.
Lo, V., University of Bologna, Italy, 7 September-15 December.
Lorent, S., VUB/UGent/UAntwerpen, 1 January–July.
Loth, M., Utrecht University, 2 June-15 August.
Mendez Merino, N., University of Navarra, Spain, 3 February-3 August.
Mens, T., Utrecht University, 1 March-30 November.
Mikšiūnaitė, A., Radboud University Nijmegen, 1 February-15 August.
Moerenhout, B., Scalda, Vlissingen, 25 August-31 December.
Mollee, M., ROC Nova College, Beverwijk, 25 August-15 January.
Naus, S., Utrecht University.
Nguyen, P., Avans Hogeschool, Breda, 18 August-31 December.
Nieto-Moreno, V., BiK-F, Frankfurt am Main, Germany, 2 June-31 July.
Peene, K., Scalda, Vlissingen, 25 August–31 December.
Peters, M., ROC Amsterdam, 25 August-31 December.
Pfannerstill, E. , University of Jena, Germany, 15 September-31 December.
Postma, E., University of Amsterdam, 1 January-31 June.
Rijs, S., ROC Nova College, Beverwijk, 20 January-26 June.
Rodda, C., University of Trieste, 15 November-31 December.
Roeterink, M. VU University, Amsterdam, 14 April-24 May.
Roodenburg, S., Helicon, Boxtel en ’s-Hertogenbosch, 25 August-31 October.
Rousselle, G., Pierre and Marie Curie University, Paris, France, 23 June-4 July.
Rozie, T., InHolland Amsterdam, 1-31 December.
Schoonderbeek, M., ROC Nova College, Beverwijk, 1-15 January.
Schrader, C., Utrecht University, 28 April-12 July.
Sewbaransingh, R., ROC Leiden, 9 September –31 December.
Slabbekoorn, V., Scalda, Vlissingen, 27 January-27 June.
Smilenova, A., University of Southampton, England, 1 May–11 November.
Smith, P., Bangor University, UK, July-31 December.
Speksneyders, Y., Avans Hogeschool, Breda, 1 January-30 June.

Stam, A., Hogeschool InHolland, 1 January-1 February.
Steenhuis, P. University of Amsterdam, 18 February-15 August.
Steenhuis, P., University of Amsterdam, 17 February-15 August.
Sweere, T. Utrecht University, January-April.
Temmesfeld, F. MARUM, Bremen, Germany, January-March.
ten Hoeve, N., Utrecht University, 29 April-18 July.
Theeuwen, M., Hogeschool Zuyd, Heerlen, 1 September-31 December.
Therkildsen, M.
Van Bijsterveldt, C.E.J., Utrecht University, 18 January–27 October.
Van de Haspel, M., University of Amsterdam, 1 January-27 June.
Van de Haterd, T., Rotterdam Mainport University of Applied Sciences. 1 August-31 December.
van de Moortel, I., Universiteit Gent, 3-28 February.
Van de Pavert, R., Hogeschool van Arnhem en Nijmegen, University of Applied Sciences. 1 August-31 December.
Van de Ven, R., Hogeschool Leiden, 1 January-28 February.
Van de Vijsel, R., Utrecht University, IMAU.
Van den Bout, B., Utrecht University.
Van den Putte, W., Fontys University of Applied Sciences, Eindhoven, 1 November- 31 December.
Van der Lugt, M., Utrecht University, 15 April-5 December.
Van Franeker, S. Utrecht University.
Van Hateren, H., Utrecht University, 1 December-31 December.
Van Heuzen, H., University of Amsterdam, 1 January-27 June.
Van Oers, S., Technical University Delft.)
Van Veen, S., Radius College, Breda, 8 September-31 December.
Venhuizen, J., MBO Helicon, Geldermalsen, 22 April-11 July.
Verbiest, S., Utrecht University, Utrecht, 01 January-9 May.
Visch, W., University Leuven, 8 December-31 December.
Visser, V., Hogeschool van Hall Larenstein, 25 August-31 December.
Way, S. , Hogeschool InHolland, Amsterdam, 1-31 January.
Wesseling, A., InHolland Hogeschool, Amsterdam, 1 July-30 November.
Wevelsiep, D., Berufskolleg Hilden, Hilden, 5 July-5 October.
Wierenga,J., University of Utrecht, 1 January-30 June.
Withagen, M. VU University, Amsterdam, 14 April-24 May.
Xia, T., HZ University of Applied Science, Vlissingen, 10 February-30 July.
Yikilmaz, G., Hogeschool Leiden, 1 Juli-31 December.
Zanoni, R., ROC Leiden, Leiden, 1 September- 31 December.
Zawadowski, T., Hogeschool van Hall Larenstein, 1 January-28 February.

Visitors

Bloemsma, M., TU, Delft, 10 September.

Boezen, D., Roozenvelt Acadamy, Middelburg, 27 June-3 July.
Collart, T., Ghent University, Belgium, 9-12 December.
Costa, P., University Lisbon, Portugal, 21-24 July.
Dana, 16-20 June.
Datema, M., Utrecht University, 21 June.
Delivet, S., Ghent University, Belgium, 3-7 February.
De Deckker, P., Australian National University.
Dijk, van M., VU University, Amsterdam, 22 April.
Dijkstra, N., Utrecht University, 16-18 April.
Fenton, I., Imperial College, London, 22 January.
Flament, P., Hawaii, SOEST, 26-28 May.
Friese, C., Bremen University.
Ganeshram, R., University of Edinburgh, UK, 9-10 April.
Guimarães, P.S., Mestrado em Biologia de Ambientes Aquáticos Doutorando em Oceanografia Física, Química e Geológica Universidade Federal do Rio Grande, Brasil, 1 December.
Hasselmann, K., IfM, Hamburg, Germany, 11-13 September.
Jones, E.M., University of Groningen, Groningen, 27-30 October.
Kaboth, S., Utrecht University, 23 May-14 June.
Kwarteng, A.Y., Director Remote Sensing and GIS Center Sultan Qaboos University, 23-27 June
Lauretano, V., Utrecht University, Febr + May + June.
Loomis, S., University of Texas at Austin, USA, 10-21 November.
Lourens, L., Utrecht University, 15-17 January, 3-6 February, 21+22 March.
Metcalfe, B., Vrije Universiteit Amsterdam.
Moreira, S., University Lisbon, Portugal, 21-24 July.
Moscon, G., Istituto Scienze Marine CNR, Bologna, Italy, 7-11 July.
Munk, W., UCSD, Scripps, 11-14 September.
Nooren, K., Utrecht University, 28-30 July +17-18 September.
Ohneck, I., Berufskolleg Hilden, Hilden, 17 -23 August.
Palamenghi, L., Marine Technology and Environmental Research Geoscience Dep., Bremen University, Germany, 8-9 December.
Riechelmann, D., University of Mainz, Germany,16-20 June.
Rush, D., Newcastle University, 23 November-5 December.
Sandersfeld, T., AWI, Bremerhaven, 15–19 September.
Sterl, A., KNMI, 20 November.
Ufkes, E., Free University, Amsterdam, 22 April + 26 July.
Valenzuela, C.J., Ghent University, Belgium, 9-12 December.
Vandorpe, T., Ghent University, Belgium, 4-5 February + 23-25 April.
Van Miltenburg, L., Minkema college, Woerden, 30 January.
Volker, C., AWI Bremerhaven, Germany, 27-30 October.
Völkner, C., Alfred Wegener Institute, Bremerhaven, Germany, 6-17 January.
Werkhorst, T., Minkema college, Woerden, 30 January.

Meetings

Hummel, H. BIOC3 Kick-off Plenary meeting, BONUS project, Copenhagen, Denmark, 3-4 March (Advisory Board member).

Hummel, H. FixO3 General Assembly Annual meeting, Heraklion, Crete, Greece, 14-16 October.

Hummel, H. COST EMBOS WGPS Pilot data-analytical workshop, the European Marine Biodiversity Observatory System, Gournes, Crete, Greece, 15-19 December, (chair, co-organiser).

Netherlands Annual Ecology Meeting, contact person: Jaap van der Meer, chairman of the organization committee. The Netherlands Annual Ecology Meeting is a two-day event organised by NERN (Netherlands Ecology Research Network) and NECOV (Dutch-Flemish Ecological Society) and supported by the Netherlands Organisation for Scientific Research (NWO). The set-up of the 2014 meeting was in accordance with previous years, and was again a great success with over 300 participants.

Stuut, J.-B.W., Precruise meeting R/V Pelagia cruise 64PE395, Texel, the Netherlands, 16 December

Jaarverslag 2014 van de Ondernemingsraad Koninklijk NIOZ

In 2014 is de Ondernemingsraad (OR) beperkt gewijzigd van samenstelling. Na zich enkele jaren voor de OR te hebben ingezet als vertegenwoordiger van de groep tijdelijke medewerkers is Cees van Slooten teruggetreden als lid en vervangen door Hans Slagter. Aldus was de samenstelling van de OR: vertegenwoordigers onderzoeks- en laboratorium medewerkers: Sander Holthuijsen (secretaris), Loran Kleine Schaars en Kirsten Kooijman (verv. secretaris), vertegenwoordigers technische en centrale diensten en stafeenheden: Sander Asjes en Ruud Witte; vertegenwoordiger ondersteunende en centrale diensten en stafeenheden: Yvonne van der Maas; vertegenwoordiger varend en havenpersoneel: Ewout Adriaans; vertegenwoordiger personeel in tijdelijke dienst: Hans Slagter; vertegenwoordigers wetenschappelijk personeel: Henk Bolhuis (verv. voorzitter) en Henk de Haas (voorzitter).

De OR heeft met de Directie en het Bestuur overleg gevoerd over uiteenlopende onderwerpen die voor een groot deel te maken hadden met de komende aanpassingen van de NIOZ-organisatie in verband met de huidige financiële situatie.
De OR heeft op 30 januari, 2 april, 22 mei, 2 juli, 21 augustus, 22 oktober en 4 december formeel overleg gehad met de Directie. In aanvulling hierop heeft er ook regelmatig informeel overleg tussen OR en Directie plaatsgevonden. Formeel overleg met het NIOZ-Bestuur vond plaats op 3 april. In verband met een wisseling van het NIOZ-Bestuur heeft het gebruikelijke tweede halfjaarlijks overleg met het Bestuur niet plaatsgevonden. De notulen van bovengenoemde vergaderingen zijn te lezen op de vernieuwde intranet webpagina van de Ondernemingsraad.

In 2014 heeft de NIOZ-OR ingestemd met een wijziging van de Uitvoeringsregeling voor Stagiaires, het nieuwe NIOZ-aanstellingsbeleid en wijzigingen in de Uitvoeringsregeling Bedrijfshulpverlening.
De OR heeft een negatief advies uitgebracht op een voorgestelde aanpassing van de NIOZ statuten.
De OR heeft positief advies uitgebracht op de voorgestelde aanstelling van het nieuwe NIOZ-Bestuur.

Oral presentations

Bakker, K. PO_4 measurements on an auto-analyser: calibration, chemistry, carry-over and flow consideration. Quasimeme Workshop, Ostend, Belgium, 6-8 February.

Bale, N., Hopmans, E., Villareal, T.A., Zell, C., Sinninghe Damsté, J.S., Schouten, S. Novel tracers for past oceanic N_2 fixation. 12th Nederlands Aardwetenschappelijk Congres (NAC 12), Veldhoven, 8-9 April.

Beauchard, O. Disentangling human-induced from natural environmental variability using invertebrate functional groups. Twinning Workshop Trawling Impact on Benthic Ecosystems (Australia, New Zealand, EU), Tromsø, Norway, 20-21 June.

Biggs, T., Brussaard, C.P.D. Antarctic phytoplankton in a changing world and its consequences for the lower pelagic food web. NWO Symposium Polar Change – A Scientific Adventure, Den Haag, 5 November.

Bolhuis, H. *Haloquadratum walsbyi*: life at the limits of water activity. Thematic week on extremophilic microorganisms, University of Liege, Liege, Belgium, 28 October.

Bolhuis, H. Introduction to the coastal microbial mats of Schiermonnikoog: a molecular twist. MaCuMBA Exchange with University of Amsterdam, Amsterdam 4 April.

Bolhuis, H. The genome of *Lyngbya aestuarii*: how to survive in a coastal microbial mat. Invited speaker, 15th International Symposium on Microbial Ecology (ISME 15), Seoul, South Korea, 24-29 August.

Bolhuis, H. The genome of the mat building cyanobacterium *Lyngbya aestuarii*: adaptations to an "extreme" environment with a twist of lactate. Invited Speaker, Molecular Genetics, University of Groningen, 31 March.

Bolhuis, H. Towards the pan-genome of *Lyngbya aestuarii*: a cosmopolitan cyanobacterial mat builder. Invited Speaker, Workshop: Glimpses at Pan-Genomes, Valencia, Spain, 5-7 November.

Booij, K. Water extraction with a plastic sheet: passive sampling of organic contaminants. LabTechnology 2014, Utrecht, 4-5 June.

Booij, K., Maarsen, N.L., van Bommel, R., Beerda, J. Hydrodynamics and polar sampler calibration: bridging the gap between field and lab. 7th International Passive Sampling Workshop, Vancouver, Canada, 8-9 November.

Bouma, T.J. et al. Towards the use of natural ecosystems for coastal defense: bottlenecks, opportunities and knowledge needs. Invited key-note speaker. International Coastal Biology Congress 2014 (ICBC 2014), Yantai city, Shandong Province, P. R. China, 26-30 September.

Bouma, T.J. On the importance of understanding the establishment of biogeomorphic ecosystems. Invited talk. Mini-symposium on salt marshes, Campus Drie Eiken, University of Antwerp, Belgium, 21 October.

Bouma, T.J., van de Koppel, J., Gwen Gillis, L., van der Heide, T., van Katwijk, M., Olff, H., Herman P.M.J. Connectivity issues in marine environments: beyond biotic exchange. Invited key-note speaker. NecoV 15th Anniversary Meeting, Connectivity towards ensuring a future for biodiversity, Den Bosch, 8 April.

Bouma, T.J., Yaakub, S.M., Soissons, L., Han, Q., Erftemeijer, P.L.A., Li, B., Ysebaert, T., van Katwijk, M., Todd, P.A. Resilience of seagrass: the importance of pre-conditioning & timing. SEAGRASS COST, Olhão, Portugal, 4-6 March.

Brenner, H., Montserrat, F., Meysman, F.J.R. Enhanced alkalinity and dissolved inorganic carbon release in intertidal sands from the Oosterschelde (The Netherlands) induced by a natural macrofaunal community. EGU General Assembly 2014, Vienna, Austria, 7-12 April.

Bruin, T.F. de, Schaap, D. Connecting Hundreds of Oceanographic Data Sources from Countries in and around Europe into a Big Data Network. American Geophysical Union Fall Meeting, San Francisco, USA, 15-19 December.

Bruin, T.F. de. NIOZ Contribution to WP1: Data collection and metadata compilation in sea regions: current status North Sea. EMODnet Chemistry Annual Meeting, Split, Croatia, 17-18 June.

Bruin, T.F. de. Report of the Advisory Group. Norwegian Marine Data Centre project Annual Meeting, Øystese, Norway, 26-28 August.

Brummer, G.-J.A. Shell growth in planktonic foraminifera. MARUM, Bremen, Germany, 27 February.

Brummer, G.-J.A. Shell ontogeny of planktonic foraminifera. AWI-NIOZ mini meeting, NIOZ-Texel, 24-25 November.

Brummer, G.-J.A., Feldmeijer, W., Prins, M.A., Ganssen, G.M. Proxy development and interpretation: seasonality and deglaciation northern North Atlantic. Symposium “Interglacial Climate Change”, Amsterdam, 3 November.

Brummer, G.-J.A., Kucera, M. Constraining ecology and population dynamics of planktonic foraminifera as paleoproxy carriers. MoU UniB-NIOZ, NIOZ-Texel, 1 April

Brussaard, C.P.D. Can we prove virus involvement in processes? – From sequence to phenotype & ecology. NBIC (Netherlands Bioinformatics Centre) Hot Topics Meeting ‘Virus discovery and beyond’, Utrecht, 13 January.

Brussaard, C.P.D. Marine virus-host interactions, diversity and influence of environmental factors. Symposium on Marine Biodiversity, Biotechnology and Metagenomics, Rio de Janeiro, Brazil, 19 November.

Brussaard, C.P.D. Veranderingen in het voedselweb o.i.v. opwarming. Noordzeedagen, Texel, 2-3 October.

Brussaard, C.P.D. Viral parasites in microbes and their effects on ecosystem functioning. International Symposium Ecology & Evolution of Marine Parasites and Diseases, Texel, 10-14 March.

Brussaard, C.P.D. Virale ecologie tijdens klimaatverandering. Diligentia - Koninklijke Maatschappij voor Natuurkunde, Den Haag, 1 December.

Brussaard, C.P.D., Maat, D. The differential effects of nutrient-limitation and irradiance level on virus-host model systems in a changing world. ASLO Ocean Science Meeting, Hawaii, USA, 23-28 February.

Burdorf, L.D.W. An introduction to cable bacteria. School of chemistry seminar, Melbourne, Australia, 28 February.

Burdorf, L.D.W. Electricity in the sediment. Marine Masters course, Texel, 8 July.

Burdorf, L.D.W., Seitaj, D., Meire, L., Malkin, S.Y., Cook, P.L.M., Meysman, F.J.R. Cable Bacteria – a global perspective. 2nd international workshop on Microbial long-distance electron transport mediated by cable bacteria, Antwerp, Belgium, 27–30 October.

Burt, W., Thomas, H., Hagens, M., Brenner, H., Paetsch, J. Using radium and carbon isotopes to evaluate the biogeochemical impact of boundary exchanges in the North Sea. EGU General Assembly 2014, Vienna, Austria, 7-12 April.

Cadée, G.C., Spoorzoeken op schelpen. Zeeuws Landschap vrijwilligers, Vlissingen, 13 February.

Cadée, G.C., Verborgen schatten in een apothekerskabinet uit 1730 in het Rijks Museum. Ledenvergadering Doopsgezinde gemeente, Den Burg, 20 March.

Camphuysen C.J. Lesser Black-backed Gulls under pressure: new data on population ecology in the Dutch Wadden Sea. "Vogelartenschutz im Nationalpark Niedersächsisches Wattenmeer - neue Entwicklungen", Wilhelmshaven, Germany, 19. February.

Camphuysen, C.J., Kloff, S., Marret, F., ould Ahmed, M., Taleb Sidi, M.O. The charismatic megafauna in the upwelling zone off Mauritania: a conservation concern. Ecosystemic Seabird/Fishery interactions in West African Waters, special session during the first International conference "Ecosystem Approach to the Management of Fisheries and the Marine Environment in West African Waters (AWA), Dakar, Senegal, 9-11 December.

Capet, A., Akoumianaki, I., Meysman, F.J.R., Soetaert, K., Grégoire, M. Benthic-Pelagic coupling in the Black Sea northwestern shelf. EGU General Assembly 2014, Vienna, Austria, 7-12 April.

Cardoso, C. Microbial mats, a population study. General Assembly MaCuMBA project, Cadiz, Spain, 21-26 September.

Cardoso, C. Microbial mats, the concept of minimal mat. MaCuMBA Exchange with University of Amsterdam, Amsterdam, 4 April.

Carvalho, M., Moreira, C., Cardoso, J., Brummer, G.-J., van Gaever, P., Queiroga H., Talhadas Santos, P., Teodorico Correia, A. Use of stable isotopes (oxygen and carbon) in otoliths to study fish movement and connectivity in Lipophrys pholis. 5th International Otolith Symposium, Mallorca, Balearic Islands, Spain, 20-24 October

Caulle, C., Mojtahid, M., Koho, K., Gooday, A., Reichart, G.J., Schmiedl, G., Jorissen, F. Benthic foraminifera from the Arabian Sea oxygen minimum zone: towards a paleo-oxygenation proxy. European Geosciences Union General Assembly 2014, Vienna, Austria, 27 April-2 May.

Chivall, D., M'Boule, D., Heinzelmann, S., Kasper, S., Sinke, D., Sinninghe Damsté, J. Schouten, S., van der Meer, M. Towards a palaeosalinity proxy: Hydrogen isotopic fractionation between source water and lipids produced via different biosynthetic pathways in haptophyte algae. Basis annual meeting 2014, Nijmegen, 27-28 March and . European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Cimatoribus, A. Simple models of ocean circulation: an upward-driven disk as a model of convection, lecture at the "Physics of the Climate System" Summer School, organised by the Faculty of Science of Utrecht University, 21 August.

Cimatoribus, A., van Haren, H., Gostiaux, L. Comparison of Ellison and Thorpe scales from Eulerian ocean temperature observations. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Cimatoribus, A., van Haren, H., Temperature statistics above a sloping deep-ocean boundary: turbulence, convection and mixing. LPO-IFREMER, France, 26 September and IMAU-UU, 14 October.

Cook, P.L.M, Roberts, K., Kessler, A., Meysman, F.J.R., Burdorf L.D.W. Thamdrup, B., Robertson, E. Do 'Cable Bacteria' Enhance Dissimilatory Nitrate Reduction to Ammonium in a Periodically Anoxic Estuary? Goldschmidt, Sacramento, USA, 8–23 June.

Cretoiu, M.S. The environmental dimension of antibiotic resistance. Microbial Ecology Course, Institute for Biodiversity and Ecosystem Studies, University of Amsterdam, Amsterdam, 3 October.

Cretoiu, M.S., Bolhuis H., Wesseling, A., Burgaud, G., Wersig, J, Kramer, D., Swiatecka-Hagenbruch, M., Cardoso, C., Grego, M., Stal, L.J. Resident communities of a coastal microbial mat as revealed by cultivation in different gradients. General Assembly MaCuMBA project, Cadiz, Spain, 21-26 September.

Cretoiu, M.S., Stal, L.J., Cardoso, C., Bolhuis, H. The metagenome of a marine microbial mat. MicroB3 Marine Metagenomics, Hinxton, UK, 24-28 March.

Davies, A., Mienis, F., Duineveld, G., Robertson, C., Ross, S.W., Rhode, M., Wolff, M., Brooke, S. Can we use historical observation data for habitat suitability modelling? A case study from Baltimore Canyon, NW Atlantic. INCISE Workshop, Edinburgh, UK, 29 September-1 October.

De Jonge, C., Hopmans, E.C., Schouten, S., Sinninghe Damsté, J.S. Novel branched glycerol dialkyl glycerol tetraethers: occurrence in the environment and implications for the use of the CBT/MBT' proxies. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

de Leeuw, J.W. . Biomarkers, Proxies, Evolution and Paleoclimate. University of Seoul, South Korea, 20 August and ISME conference, ECORD/ICDP MagellanPlus Workshop Series Program, Advancing Subsurface Biosphere and Paleoclimate Research, Seoul, South Korea, 21-23 August.

de Leeuw, J.W. Organisch afval: Bron van de Organische Geochemie. Darwin Christmas Lecture 2014, Leiden, 21 December.

de Lima Sobrinho, R., Kim, J-H., Abril, G., Zell, C., Moreira-Turcq, P., Mortillaro, J-M., Meziane, T., Sinninghe Damsté, J.S., Bernardes, M. Seasonal and spatial contrasts of sedimentary organic carbon in floodplain lakes of the central Amazon basin. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

De Paoli, H., van der Heide, T., Christianen, M., van den Berg, A., Silliman, B., van de Koppel, J. Don't Panic, Organize, Testing for the importance of self-organization for ecosystems resilience. Benthic Ecology Meeting, Jacksonville, Florida, USA, 19-22 March.

de Stigter, H.C. Polymetallic nodule mining in the Pacific: opportunities for biomonitoring? FOBIMO Workshop, NIOZ, Texel, 26-27 June

Dessandier, P.-A., Bonnin, J., Kim, J.-H., Bichon, S., Grémare, A., Deflandre, B., Sinninghe Damsté, J.S. Distribution of live benthic foraminifera off the Douro river (western Iberian margin): the importance of the terrestrial organic matter. FORAMS 2014 (international symposium on foraminifera), Concepcion, Chile, 19-24 January.

Dijkstra, N., Kraal, P., Rijkenberg, M.J.A., Slomp, C.P. Coupled dynamics of manganese, iron and phosphorus in the water column of the Black Sea and implications for phosphorus burial. 46th International Liège Colloquium, Belgium, 5-9 May

Frieling, J., Gebhardt, H., Adekeye, O.A., Akande, S.O., Reichart, G-J., Middelburg, J., Schouten, S., Sluijs, A. The Paleocene – Eocene Thermal Maximum: temperature and ecology in the tropics. Climate and Biotic Events in the Paleogene, Ferrara, Italy, 1-6 July.

Galer, S.J.G., Abouchami, W., Xie, R.C., Janssen, D.J., Rijkenberg, M., Gerringa, L., Cullen, J.T., de Baar, H.J.W. Global oceanic Cadmium isotope distribution. Goldschmidt Conference, Sacramento, USA, 8-13 June

Geelhoed, J., Boschker, E., Meysman, F.J.R. Filamentous bacteria involved in long-distance electron transport in marine sediments. 46th International Liège colloquium on ocean dynamics, Liège, Belgium, 5-9 May.

Geelhoed, J., Hidalgo, S., Tramper, A., Boschker, E. Meysman, F.J.R. Long-range electron transport by filamentous sulfide-oxidizing bacteria in coastal marine sediments. 15th International symposium on microbial ecology, Seoul, South-Korea, 24-29 August.

Geelhoed, J., Tramper, A., Hidalgo, S., Meysman, F.J.R. Targeted culturing of cable bacteria - first results. 2nd international workshop on Microbial long-distance electron transport mediated by cable bacteria, Antwerp, Belgium, 27–30 October.

Gerkema, T. Coastal and shelf-sea dynamics, Introduction: an excursion through ages and seconds. BBOS Symposium, Texel, 31 October.

Gerkema, T. Duran-Matute, M., Nauw, J.J., Van der Hout, C.M. Back and forth in the Vlie tidal inlet: transport of suspended particulate matter and fresh water. Seminar IOW, Warnemünde, Germany, 8 April.

Gerkema, T. Lecture on Internal waves. Physical Limnology course, Heidelberg University, 25-26 March.

Gerkema, T. Mathematics and internal waves. 3TU.AMI Conference "Mathematics & Water", Delft, 13 November.

Gerkema, T. The traditional approximation: from Laplace, via the Drei-Brüder-Schacht, to the oceans. Seminar IOW, Warnemünde, Germany, 12 March.

Gerkema, T. Wiskundige aspecten van interne golven. Symposium "Go with the flow", Universiteit Twente, 23 May.

Gerkema, T., Schuttelaars, H.M. The sediment balance of the Wadden Sea, NCK themadag, Leiden, 10 October.

Gollner, S. Geological settings – gas hydrates, massive sulfide deposits, ferromanganese crusts and manganese nodules. MIDAS WP6 workshop, Wilhelmshaven, Germany, 11-13 March.

Gollner, S. Vent fauna. MIDAS WP6 workshop, Wilhelmshaven, Germany, 11-13 March.

Gollner, S., Govenar, B., Martinez Arbizu, P., Mills, S., Le Bris, N., Weinbauer, M., Shank, T., Bright, M. Meiofauna and macrofauna succession after a recent eruption at the 9°N East Pacific Rise. MIDAS WP6 workshop, Wilhelmshaven, Germany, 11-13 March.

Gostiaux, L., van Haren, H. Eddy-shape signature in Thorpe's displacement profiles: advances in characterization of turbulent overturns. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Grosse, J., van Breugel, P., Boschker, H.T.S. Tracing carbon allocation into cellular compounds using LC-IRMS and GC-c-IRMS: A phytoplankton study. BASIS Meeting, Nijmegen, 27-28 March.

Hagens, M. , Slomp, C.P., Meysman, F.J.R., Borges, A.V., Middelburg, J.J. Impact of hypoxia and ocean acidification on pH dynamics in a seasonally stratified coastal marine lake. Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Hagens, M., Slomp, C.P., Meysman, F.J.R., Seitaj, D., Borges, A.V., Middelburg J. J Hypoxia and biogeochemical processes concomitantly influence acidification in the seasonally stratified coastal marine Lake Grevelingen, the Netherlands. 46th International Liège colloquium on ocean dynamics, Liège, Belgium, 5-9 May.

Hak, K., Peperzak, L. Enforcement and control. Shipping and the Ballast Water Challenge, ProSea, Amsterdam, 23 April.

Heimburger, L.-E., Sonke, J.E., Rijkenberg, M.J.A., Gerringa, L.J.A., de Baar, H.J.W. Mercury in the Black Sea - results of the 2013 GEOTRACES MEDBlack cruise. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Heinzelmann, S., Villanueva, L., Schouten, S., Sinninghe Damsté, J., van der Meer, M. D/H ratios of fatty acids as a tool to infer the metabolism of microbial communities. Californian Goldschmidt, Sacramento, USA, 8-13 June.

Heinzelmann, S.M., Villanueva, L., Sinninghe Damsté, J.S., Schouten, S., van der Meer. M.T.J. Compound specific hydrogen isotopes as a culture independent method to identify core metabolisms of microorganisms *in situ*. Basis annual meeting 2014, Nijmegen, 27-28 March.

Herman, P.M.J. and Spatial Ecology Department. Speak for the worms.
How science can inform coastal management. Invited keynote lecture. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Herman, P.M.J. Vissen en natuur in een verander(en)de wereld. Symposium Waddenacademie over garnalenvisserij, Terschelling, 6-7 February.

Holthuijsen, S.J., Compton, T.J., Piersma, T. The Waddensea, No management without monitoring. Lecture, van Hall Instituut, Texel, 30-June.

Holthuijsen, S.J., van der Veer, H., Dekinga, A., ten Horn, J., Fey, B. Het NIOZ op de Waddenzee, SIW dag, Harlingen. 25-April.

Hörnlein, C. Rhythm on the beach. Metabolic pathways in marine microbial mats. Environmental metagenomics symposium, Wageningen, 19 September, MACUMBA General assembly 2014, Cadiz, Spain, 21-24 September.

Hummel, H. A comparison on the degree of implementation of marine biodiversity indicators by European countries in relation to the Marine Strategy Framework Directive (MSFD). 49th European Marine Biology Symposium (EMBS), St. Petersburg, Russia, 8-12 September.

Hummel, H. BES-SFE Annual meeting, joint British Ecological Society and Société Française d"écologie meeting. Invited key-note lecture at Symposium 5 "Genomics in marine monitoring: New opportunities for assessing marine health status" on "Integration of genomics and ecology, a promising though inconvenient challenge", Lille, France, 9-12 December.

Hummel, H. EMBOS Training School "Marine Biodiversity Observation: A system to bring theory and practice together". Several oral presentations on "Marine Biodiversity and the role of EMBOS (the European Marine Biodiversity Observation System) in a historical perspective", Santander, Spain, 12-17 May.

Hummel, H. EMBOS Training workshop on the EMBOS Pilot Project, several oral presentations on "Sampling Procedures and Protocols for Hard and Soft Substrata", Oristano, Italy, 17-20 February.

Hummel, H. EMBOS Workshop on the Analysis of the EMBOS Pilot data, HCMR, Gournes, Crete, Greece, 15-19 December.

Hummel, H. EMBRC final General Assembly meeting. Invited lecture on “Proposals for Horizon 2020 challenges for marine biodiversity, ecosystem functioning and sustained coastal observation”, on behalf of MARS, MarBEF+, and EMBOS, Stazione Zoologica Anton Dohrn (SZN), Naples, Italy, 22-24 January.

Hummel, H. MARS Directors & WAMS International Assembly meeting: Future perspectives for marine science. Several oral presentations on “The MARS business plan”, “Research Infrastructures for integrated and sustained coastal observation.” - A must or a chance and challenge for marine stations to strengthen coastal observatories?”, “European Observatory networks: EMBOS, FixO3, JERICO”, “The role of MARS in Horizon 2020”. Amsterdam, 26-28 March.

Hummel, H. JERICO (FP7 project: Towards a Joint European Research Infrastructure network for Coastal Observatories) General Assembly, Future Strategy for biological coastal observation, Oslo, Norway, 6-7 May.

Jesus, C., de Stigter, H., Oliveira, A. Canhão Submarino de Lisboa: um depocentro de sedimentos? 3as Jornadas de Engenharia Hidrográfica, Lisbon, Portugal, 24-26 June.

Kaag, K. , Peperzak, L. The “Shanghai Filter Test”, a standard test beyond G8. Ballast water management, Bremen, Germany, 23-25 September.

Kaiser, J., Moros, M., Baas, M., Sinninghe Damsté, J., Pollehne, F., Arz, H. Application of the TEX_{86} temperature proxy in the Baltic Sea: insights from surface and trap sediments, The 12th Colloquium on Baltic Sea Marine Geology, Warnemünde, Germany, 8-12 September.

Karagicheva, J., Rakhimberdiev, E., Dekinga, A., Koolhaas, A., Brugge, M., Piersma, T. Regulation of spring body mass gain in Red Knots *Calidris canutus.* 44th IWSG Conference, Haapsalu, Estonia, 26-29 September .

Kim, J-H., Schouten, S., Marino, G., Huguet, C., Helmke, P., Rampen, S., Rodrigo-Gámiz, M., Buscail, R., Hopmans, E.C., Pross, J., Sangiorgi, F., Middelburg, J.J., Villanueva, L., Zell, C., Warden, L., Sinninghe Damsté, J.S. Influence of deep-water derived isoprenoid tetraether lipids on the TEX_{86}^{H} paleothermometer. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Korte, L., Van der Does, M., Munday, C., Brummer, G.-J. A., Stuut, J.-B.W. Marine environmental effects of Saharan-dust deposition – changing climate through ocean fertilization? Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April and ICAR-8, Lanzhou, China, 21-25 July.

Kromkamp, J.C. Automated FRRF measurements provide an alternative means to obtain seasonal and annual marine primary production estimates. VLIZ, Oostende, Belgium, 21 March.

Kromkamp, J.C. Eutrophication in the 2-Seas area. ISECA conference, Boulogne-sur-Mer, France, 30 June-1 July.

Kwiecien, O., Tomonaga, Y., Brennwald, M.S., Randlett, M-E., Peterse, F., Bechtel, A., van der Meer, M., Stockhecke, M., Bucher, S., Anselmetti, F., Litt, T., Schubert, C.J., Kipfer, R. Geochemistry of Lake Van pore water and sediment, or how to distinguish climatic from diagenetic signals? European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Lavaleye, M.S.S. De Noordzee als leefomgeving voor mollusken, historisch en ecologisch. Lustrum Weekend Nederlandse Malacologische Vereningen (NMV), Ecomare, De Koog, 20 September.

Lavaleye, M.S.S. Geschiedenis van het molluskenonderzoek in de Noordzee en enkele resultaten van recente cruises met de Pelagia. Natuur Excursie Texel (NET), Texel, 27 March.

Lipsewers, Y., Hopmans, E.C., Schouten, S., Sinninghe Damsté, J.S. The role of anammox and denitrifying bacteria in hypoxic/anoxic and sulfidic SALINE lake sediments. Darwin Days 2014, Noordwijkerhout, 20-21 November.

Little, S.H., Vance, D., Cameron, V., Rijkenberg, M.J.A., Andersen, M.B., Lyons, T., McManus, J. Zn and Ni isotope systematics in the Black Sea, an analogue for past ocean anoxia. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Little, S.H., Vance, D., Lyons, T., McManus, J., Rijkenberg, M.J.A. The significance of anoxic settings to the oceanic cycling of Cu and Zn isotopes. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Loomis, S., Russell, J., Heureux, A., D'Andrea, W., Sinninghe Damsté, J. Seasonal variability of branched glycerol dialkyl glycerol tetraethers in a temperate lake system. Californian Goldschmidt, Sacramento, USA, 8-13 June.

Loomis, S., Russell, J., Sinninghe Damsté, J. Exploring the use of branched glycerol dialkyl glycerol tetraethers (brGDGTs) as a lacustrine paleotemperature proxy. AGU Fall Meeting, San Francisco, California, USA, 15-19 December.

Lubsch, A, Timmermans, K.R. 161 days NIOZ Seaweed Centre or “leaving the Stone Age”. Seagriculture, Terneuzen, 24-25 September.

Maas, L. Nortek User Meeting “Capturing the elusive spatial structure of internal waves, de Koog, Texel, 27 June.

Maas, L., Experimental falsification of internal-tide-generation paradigm, 50th anniversary of GK Batchelor Laboratory, Department of Applied Mathematics and Theoretical Physics University of Cambridge, UK, 7 April

Maas, L., Physics of Estuaries, NIOZ Marine Master course, 30 June.

Maas, L., Topographies lacking tidal interaction, ENSL Lyon, France, 14 November.

Maas, L., Wave attractors, Applied Math seminar at Leeds University, UK, 19 February.

Meire, L., Meysman, F.J.R., Søgaard, D., Mortensen, J., Rysgaard, S. Glacial meltwater and primary production are the drivers of strong CO_2 uptake in Greenlandic fjords. Arctic Change meeting, Ottawa, Canada, 5-8 December.

Meysman, F.J.R., Dorina, D., Malkin, S.Y., Vasquez-Cardenas, D., Boschker, H.T.S. A new way of life detected in coastal sediments: microbial sulphur oxidation via long-range electron transport. Goldschmidt Conference, Sacramento, USA, 8–23 June.

Meysman, F.J.R., Seita, D., Malkin, S.Y., Vasquez-Cardenas, D., Boschker, H.T.S. A novel way of life emerges from hypoxic sediments: microbial sulphur oxidation via long-distance electron transport. 46th International Liège colloquium on ocean dynamics, Liège, Belgium, 5-9 May.

Mezger, E.M. The development of Dutch barrier islands - a balance between sand and sea. The Micropaleontological Society Joint Foraminifera and Nannofossil Groups Spring Meeting, Texel, 23-25 June

Mezger, E.M., De Nooijer, L.J., Brummer, G.J.A., Reichart, G.J. Sodium in foraminiferal calcite as a direct proxy for salinity. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Mezger, E.M., Geerken, E. Sodium in foraminiferal calcite as a direct proxy for salinity, AWI-NIOZ minimeeting, Texel, 24-25 November.

Mienis, F. Cold-water corals - Oases in the deep sea. Nortek User's Meeting, Den Burg – Texel, 25-27 June

Mienis, F. Oases in the deep-sea. Shell sensitive area workshop, Den Hoorn – Texel, 20-21 May

Mienis, F. Studie en Loopbaan. Lecture at VU University Amsterdam, 6 February.

Mienis, F. Cold-water corals in the North Atlantic Present-Past and Future. Lecture at Amsterdam University College, Amsterdam, 12 November.

Mienis, F., Duineveld, G., Robertson, C., Demopoulos, A., Davies, A., Prouty, N., Roark, B., Ross, S.W., Brooke, S. Particle transport and deposition in the Norfolk and Baltimore canyon, NW Atlantic, INCISE Workshop, Edinburgh, UK, 29 September-1 October.

Moerdijk-Poortvliet, T.C.W., Stal, L.J., Boschker, H.T.S. Tracing carbon flow in microphytobenthic communities by LC/IRMS. ASLO Ocean Science Meeting, Honolulu, HI, USA. 23-28 February.

Montserrat F., Way S., Meysman F.J.R. Enhanced Olivine Dissolution: Creating A Coastal CO_2 sink? Deltas in Times Of Climate Change II conference, Rotterdam, 24-26 September.

Montserrat F., Way S., Meysman F.J.R. Mitigation of Ocean Acidification in Coastal Systems through Enhanced Mineral Weathering – Proxies and process dynamics. Climate Engineering Conference (CEC14), Berlin, Germany, 18-21 August.

Montserrat, F., Meysman F.J.R. Mitigation of Ocean Acidification in Coastal Systems through Enhanced Mineral Weathering. Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Moore, E. Villanueva, L., Hopmans, E.C., Rijpstra, W.I.C., Mets, A., Dedysh, S.N., Sinninghe Damsté, J.S. Abundant trimethylornithine lipids and specific gene sequences suggest Planctomycete importance at the oxic/anoxic interface in Sphagnum-dominated northern wetlands. Darwin Days 2014, Noordwijkerhout, 20-21 November.

Munday, C., Brummer, G.-J. A., van der Does, M., Korte, L., Stuut, J.-B.W. Bacterial profiling of Saharan dust deposition in the Atlantic Ocean using sediment trap moorings, ICAR-8, Lanzhou, China, 21-25 July

Mutterlose, J., Bottini, C., Schouten, S., Sinninghe Damsté, J.S. Evidence for high sea-surface temperatures during the early Aptian OAE 1a in the Boreal Realm. GeoFrankfurt 2014, Dynamik des Systems Erde / Earth System Dynamics. Goethe Universität Frankfurt am Main, Germany, 21.-24. September.

Nauw, J. J., Philippart, C. J. M. Duran-Matute, M., Gerkema, T. Estimates of exposure times in the Wadden Sea using contrasting methods, PECS conference, Porto de Galinhas, Brazil, 19-23 October.

Nauw, J.J., Gerkema, T., Hoitink, A. J. F. SEAWATT: Sedimentation and Erosion Assessment & Wake Analysis of Tidal Turbines, Tidal kick-off Symposium, Den Oever, 12 March.

Nauw, J.J., Merckelbach, L.M., Ridderinkhof, H., van Aken, H.M. Ferry-based observations of the transport of total suspended matter through the Texel inlet, Nortek North European User Symposium, De Koog & 't Horntje , Texel, 26-27 June.

Nieuwhof, S., van Belzen, J., van de Koppel, J., Herman, P.M.J., van der Wal, D. Spatially extended ecosystem engineering by shellfish. Marine Master Course, Texel, 9 July.

Novoa, S., Wernand, M.R. The forel-ule scale converted to a modern tool for water quality monitoring by citizens, Ocean Optics XXII Conference, Holiday inn by the bay, Portland, Maine, US, October 26–31.

Oudman, T., Bijleveld, A., Dekinga, A., Cluderay, J., Hin, V., Kavelaars, M., de Fouw, J., Holthuijsen, S., Piersma, T., van Gils, J.A. Tracking red knots to explain differences in gut size and diet choice. NAEM meeting, Netherlands, 11-12 February

Peperzak, L. Experience from Facility & Research Centre with different rapid test methods. Ballast Water Workshop 2014, Kiel-Schwentinental, Germany, 2 June.

Peperzak, L. Ships and invasive species: from testing ballast water treatment systems to the development of rapid and cost-effective on-board compliance and self-monitoring techniques. International Conference on Advanced Technologies for Management of Ballast Water & Biofouling (MABB 2014) Chennai, India, 4-7 March.

Peperzak, L. Ships, invasive species and ballast water treatment techniques. How to kill 70 million plankton cells per second in 250 m^3 water. Symposium Ocean Present Future, Utrecht University, Utrecht, 14 January.

Rabitti, A., Gerkema, T., van Haren, H., Maas, L. R. M. Internal waves and equatorial ocean dynamics. BBOS PhD's & Post Docs annual meeting, Texel, 29-31 October.

Rao, A., Malkin, S.Y., Meysman, F.J.R. The Influence of Long Distance Electron Transport on Carbonate Dynamics in Sediments and Benthic-Pelagic Coupling. Goldschmidt Conference, Sacramento, USA, 8–23 June.

Ribo, M. et al. incl H. van Haren. Morphobathymetry and formation processes of sediment waves in the Gulf of Valencia continental slope (NW Mediterranean). European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Rigaud, S., Maire, O., Polsenaere, P., Meysman F.J.R. , Anschutz, P. , Deflandre, B. In situ assessment of oxygen dynamics in seagrass meadows. Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Rijkenberg, M.J.A., Middag, R., Conway, T.M., Bruland, K.W., de Baar, H.J.W. Excellent consistency of dissolved manganese, iron, cobalt, nickel, copper, zinc, cadmium and lead at the Bermuda crossover station of two Geotraces sections. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Roark, B., Prouty, N.G.; Davies, A.J.; Demopoulos, A.; Mienis, F. Using water column characteristics to better understand the cycling of dissolved and particulate matter in Norfolk and Baltimore canyons, ASLO. Honolulu, USA, 23-28 February.

Robertson, C., Demopoulos, A., Bourque, J., Duineveld, G., Mienis, F., Davies, A., Ross, S.W., Brooke, S. Benthic community structure and function in Baltimore Canyon, USA. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Robertson, C., Demopoulos, A., Bourque, J., Mienis, F., Duineveld, G., Ross, S.W., Brooke, S. Distinct benthic community trends driven by an enrichment paradox in Mid-Atlantic Bight canyons, NW Atlantic., INCISE Workshop, Edinburgh, UK, 29 September-1 October.

Rodrigo-Gámiz, M., Rampen, S.W., Schouten, S., Sinninghe Damsté, J.S. The impact of oxic degradation on the novel long chain diol temperature proxy. Californian Goldschmidt, Sacramento, USA, 8-13 June.

Rolison, J.M., Middag, R., Stirling, C.H., Rijkenberg, M.J.A., de Baar, H.J.W. Dissolved trace metal distributions in the Black Sea and Bannock Basin: results from the recent MedBlack GEOTRACES expedition. Goldschmidt Conference, Sacramento, California, USA, 8-13 June

Rush, D., Sinninghe Damsté, J., Poulton, S., Thamdrup, B., Acuna Gonzalez, J., Schouten, S., Jetten, M., Talbot, H. Anammox: Source of BHT stereoisomer in marine sediments. Californian Goldschmidt, Sacramento, USA, 8-13 June and Darwin Days 2014, Noordwijkerhout, 20-21 November.

Seitaj D., Gambari, F., Slomp, C., Meysman, F.J.R. Microbial innovation and the quest for electron donors in marine sediments. Darwin Days, Conference of Darwin centre for Biogeosciences, Noordwijkerhout, 20-21 November.

Seitaj, D., Malkin, S.Y., Schauer, R., Meysman, F.J.R. Efficient sulfide detoxification in seasonally hypoxic sediments by competing S-oxidizing bacteria. International colloquium on Low Oxygen Environments In Marine, Estuarine And Fresh Waters, Liege, Belgium, 5–9 May.

Seitaj, D., Robert, C., Aller, Jaime Soto-Neira, Qing Zhu, Meysman F.J.R. Hunting for cable bacteria in Long Island Sound. 2nd international workshop on Microbial long-distance electron transport mediated by cable bacteria", Antwerp, Belgium, 27–30 October.

Sinninghe Damsté, J. GDGT-based paleotemperature proxies: Recent developments in calibration and application. Brown University, USA, 1 August.

Sinninghe Damsté, J. New research programme: Netherlands Earth System Science Center. 12th Nederlands Aardwetenschappelijk Congres (NAC 12), Veldhoven, 8-9 April.

Sinninghe Damsté, J. Potential application of branched tetraether lipids as palaeo-environmental and palaeoclimatic proxies in lakes and marine systems. Goldschmidt Conference, Sacramento, USA, 8-13 June.

Sinninghe Damsté, J.S., Warden, L., Sollai, M., Mets, A., Moros, M. Determining the predominant cause of anoxia in the Baltic Sea over the Holocene. The 12th Colloquium on Baltic Sea Marine Geology, Warnemünde, Germany, 8-12 September.

Soetaert, K. Invited talk. Boundary value problems in the open-source software R. International conference on numerical analysis and applied mathematics, Rhodos, Greece, 22-26 September.

Soetaert, K. Invited talk. Modeling Benthic-Pelagic coupling. 8th European Conference on Ecological Modelling. Beyond boundaries: next generation modelling, Marrakech, Morocco, October 27-30.

Soetaert, K. Invited talk. Regime shifts in tidal estuaries: biogeochemical implications. Workshop Hamburg, Germany, 4-5 September.

Soetaert, K. Invited talk. Solving differential equations in R. Use R conference, Los Angeles, USA, July.

Soissons, L.M., Li B., Han, Q., van Katwijk, M.M., Ysebaert, T., Herman, P.M.J., Bouma, T.J. Contrasting responses of two indicators in seagrass beds: Site and Timing effects. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Sollai, M., Hopmans, E.C., Schouten, S.; Keil, R.G., Sinninghe Damsté, J.S. Intact polar lipids as indicators of N-cycling in the Eastern tropical North Pacific oxygen minimum zone. 2014 Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Sollai, M., Warden, L., Bale, N.J., Hopmans, E.C., Mets, A., Moros, M., Sinninghe Damsté, J.S. Heterocyst glycolipids in the Baltic Sea: species distribution and potential applications as tracers of anoxic events. Darwin Days 2014, Noordwijkerhout, 20-21 November.

Stal, L.J. MaCuMBA. 7th EFIB Industry workshop, Reims, France, 29-30 September.

Stal, L.J. Microbial mats: a living entity (keynote). FNRS Astrobiology Meeting, Liege, Belgium, 3 November.

Stal, L.J., Wijnholds, A., Grego, M. Strain selection for biodiesel production. InteSusAl project meeting, Olhão, Portugal, 8-9 April.

Steenhauer, L., Pollard, P., Carreira, C., Limpens, R., Koster, A. Brussaard C.P.D. Isolation and characterization of a virus infecting the invasive filamentous cyanobacterium *Cylindrospermopsis raciborskii* in the Netherlands. ICHA-16th International Conference on Harmful Algae, Queensland, Australia, 27-31 October.

Steinhardt, J., Cléroux, C., de Nooijer, L.J., Ullgren, J., Durgadoo, J.V., Brummer, G.-J.A., Zahn, R., Ganssen, G., Reichart, G-J. Reconstructing eddies using Mg/Ca of multiple species of planktonic foraminifera. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Steinhardt, J., Ullgren, J., De Nooijer, L., Cléroux, C., Durgadoo, J.V., Brummer, G-J.A., Reichart, G.J. Tracking eddies in the Mozambique Channel based on single specimen foraminiferal Mg/Ca analyses. Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April

Stichel, T., Kretschmer, S., Lambelet, M., van der Flierdt, T., Rutgers van der Loeff, M., Rijkenberg, M.J.A., Gerringa, L.J.A., de Baar, H.J.W. The interplay between particulate and dissolved neodymium in the Western North Atlantic: First insights and interpretations. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Stirling, C.H., Rolison, J.M., Middag, R., Rijkenberg, M.J.A., de Baar, H.J.W., 2014. Biogeochemical cycling of uranium in redox-controlled environments: A 238U/235U case study of the Black Sea. Goldschmidt Conference, Sacramento, California, USA, 8-13 June

Sulu-Gambari, F., Seitaj, D., Meysman, F.J.R., Slomp, C.P. Sediment phosphorus dynamics in a marine coastal lake: Response to seasonal variations in bottom water redox conditions. 46th International Liège colloquium on ocean dynamics, Liège, Belgium, 5-9 May.

Svensson E., Schouten, S., Hopmans, E.C., Middelburg, J.J., Sinninghe Damsté, J.S. Compound-specific nitrogen isotope analysis of nitrogen-containing membrane lipids and their biosynthetic amino acid precursors. Basis annual meeting 2014, Nijmegen, 27-28 March.

Svensson, E., Schouten, S., Hopmans, E.C., Middelburg, J.J., Sinninghe Damsté, J.S. The $\delta^{15}N$ of intact polar lipids – method development and first results. 2014 Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Thieltges, D.W. Introduction to the project 'Effects of invasive species on native predator-prey and pathogen-host webs', 13th Symposium Waddenacademie, Leeuwarden, 10-11 December.

Thieltges, D.W. Parasite biodiversity and the functioning of marine ecosystems, First Mares Conference Marine Ecosystems Health and Conservation, Olhão, Portugal, 17-21 November.

Thieltges, D.W. Parasites in food webs – from consumers to resources. 4th Symposium of the DFG Priority Programme 1399 on host-parasite coevolution, Noer, Germany 29 September-2 October.

Timmermans, K.R. Biomassateelt op zee , Energy Board meeting, Den Oever, 5 March.

Timmermans, K.R. Maar waarom zeewier? NIOZ, Texel, 7 July.

Timmermans, K.R. Seaweeds harvest the future , CEFAS, Norwich, United Kingdom, 27 March.

Timmermans, K.R. Zeewier: het gewas van de toekomst?" NIOZ, Texel, 4 October.

Timmermans, K.R., Seaweed cultivation, Water innovation conference Amsterdam, 11 December.

Van Avesaath, P.A. JERICO Board meeting, Oral presentation on "Development and implementation of a pan-European Marine Biodiversity Observatory System – EMBOS". Brussels, Belgium, 26 February.

Van Belzen, J., Skow, M.W., Blight, A.J., Davies, A.J., Hawkins, S.J., Herman, P.M.J., Bouma, T.J. The role of tidal settings on coastal protection services and stability of intertidal habitats. The Netherlands Annual Lunch talk, Delft University of Technology, 10 June.

Van Belzen, J., van de Koppel, J., Herman, P.M.J., Bouma, T.J. Disturbing signs: Comparing the resilience of saltmarshes using experimental disturbances. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February and The Netherlands Annual Lunch talk, Utrecht University, 22 May.

Van de Koppel J., Rietkerk, M. A pretty pattern or a pivotal process? A tale of spatial self-organization in ecology. Keynote speaker. SEPM autogenic patterns symposium, Grand Junction, Colorado, USA, 5 August.

Van de Koppel J., Rietkerk, M. Surfing the waves of spatial ecology. Keynote talk. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Van de Koppel, J. Does behavior matter … in a self-organized world. Invited speaker. Movement ecology workshop. Fieldstation the Herdershut, Schiermonnikoog, 16 September.

Van de Koppel, J. Land uit Zee. Vlaams-Nederlandse Schelde Commissie, Bergen op Zoom, 5 November.

Van de Koppel, J. Lecture. University College Roosevelt, 10 February.

Van de Koppel, J. Mussel beds: As strong as steel. Keynote lecture. IMARES annual meeting, IJmuiden, 15 April.

Van de Koppel, J. On mussels and patterns. Invited talk. Analysis and Dynamical Systems group, Leiden University, 17 November.

Van de Koppel, J. Ruimte! Essentieel voor getijdenatuur. Zeeuwse province and NGO's at the NIOZ-Yerseke, 20 February.

Van de Koppel, J. Salt marsh dynamics; A tale of troubles. Invited lecture. University College Roosevelt, 13 April.

Van de Koppel, J. Spatial self-organization of intertidal systems. Invited talk. Ghent University, Terrestrial Ecology Unit, 16 April.

Van de Koppel, J. Spatial self-organization. On a search for general principles. Invited talk. ETH Zurich, Switzerland, 20 May.

Van de Koppel, J. Using ecological self-organization for procedural content generation in virtual ecosystems. University of Konstanz, Germany, 23 May and Utrecht University, 28 May.

Van de Koppel, J., Rietkerk, M. Marine animals, living in an invisible world. Invited talk. Wageningen University, 14 February.

Van de Koppel, J., Rietkerk, M. Mechanisms of pattern formation in real ecosystems. Keynote lecture. Lorentz Workhop "Spatio-temporal dynamics in Ecology", Leiden University, 8 December.

Van der Does, M., Korte, L., Munday, C., Brummer, G.-J. A., Stuut, J.-B.W. Saharan dust and its relations to climate, ICAR-8, Lanzhou, China, 21-25 July

Van der Meer, J. A first introduction into Dynamic Energy Budget theory: assumptions and consequences. ICES WGIPM, Haarlem, 20 March.

Van der Meer, J. Some further notes on Dynamic Energy Budget theory: parameter estimation. COST Conservation Physiology of Fish, Haarlem, 22-26 March.

Van der Meer, J., Kooijman, S.A.L.M. Inference on energetics of deep-sea fish that cannot be aged: The case of the hagfish. MARES conference, Faro, Portugal, 17-21 November and OST Conservation Physiology of Fish, Thessaloniki, Greece, 20-24 November.

van der Meer, M. D/H of alkenones as proxy for paleo sea surface salinity. Stable water isotopes and climate Workshop, Stockholm University, Sweden, 20-22 October.

van der Meer, M., M'Boule, D., Kasper, S., Chivall, D., Sinke, D., Schefuss, E., Schouten, S., Sinninghe Damsté, J. Impact of species composition on paleosalinity reconstructions from coastal δD alkenone records. Goldschmidt Conference, Sacramento, USA, 8-13 June.

van der Meer, M.T.J., M'Boule, D., Chivall, D., Kasper, S., Sinke, D., Schouten, S., Sinninghe Damsté, J.S. Developing new methods to estimate paleosalinity; understanding the past as key to future climate change. 12th Nederlands Aardwetenschappelijk Congres (NAC 12), Veldhoven, 8-9 April.

van Dijk, I., de Nooijer, L.J., Hart, M.B., Reichart, G.J. Success of foraminiferal calcification mechanisms depend on ocean chemistry. AGU Fall Meeting, San Francisco, USA, 15-19 December.

van Dijk, I., de Nooijer, L.J., Wolthers, M., Reichart, G.J. Decoupling the effects of seawater carbonate chemistry on foraminiferal calcification. Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April.

van Dijk, I., de Nooijer, L.J., Wolthers, M., Reichart, G.J. Towards a new proxy for ocean acidification parameters: Zn/Ca of foraminiferal calcite. The Micropaleontology Society (TMS) Spring Meeting 2014, Den Burg, 23-25 June.

van Gils, J.A. How effects of Arctic climate change on a long-distance migrant shorebird may carry-over to its tropical wintering grounds. Global and Regional Environmental Changes: Responses of Marine Ecosystems. Symposium of the Institute for Basic Science, Seoul, South-Korea. 13 February.

van Gils, J.A. Phenotypische flexibiliteit in kanoeten. Lectures for MSc students Wageningen University, 3 October.

van Haren, H. Observations on Oceanography. EUPRO-lecture, École Centrale de Lyon, France, 14 May.

van Haren, H. Energy release through internal wave breaking at underwater topography. Seminar Earth Sciences, the University of Tokyo, Japan, 8 August.

van Haren, H., Variable large internal wave breaking above a NE-Atlantic guyot. AOGS2014, Sapporo, Japan, 28 July-1 August.

Van Oevelen, D. Lecture 'Cold water coral reefs – Hotspots in the deep ocean' Utrecht University in the MSc course Marine Sciences, 13 October.

Van Oevelen, D., Cathalot, C., Cox, T., Lavaleye, L., Duineveld, G., Kutti, T., Fosså, J.H., Soetaert, K., Heip, C., Meysman, F.J.R. Reefs of the deep: Hotspots of carbon processing along continental margins. Kick-off meeting SedExSponge, Bergen, Norway, 17-19 February.

Van Oevelen, D., De Goeij, J.M., Vermeij, M.J.A., Osinga, R., Middelburg, J.J., De Goeij, A.F.P.M., Admiraal, W. Surviving in a marine desert: The sponge loop retains resources within coral reefs. Ghent University, Belgium, 26 March.

Van Oevelen, D., Soetaert, K. Cold-water coral reef communities: Hotspots in the deep ocean. Marine sciences symposium, Utrecht, 16 January.

Van Oevelen, D., Stratmann, T., Soetaert, K. How can we use modeling to define the impact of disturbance on food webs & ecosystem function? MIDAS workshop Wilhelmshaven, Germany, 11-13 March.

Van Oevelen, D. Lecture 'Cold water coral reefs – Hotspots (of interactions) at the deep seafloor' at the Vrije Universiteit Amsterdam in the MSc course 'Evolution of Species Interactions Lecture', 6 November.

Van Oevelen, D. Lecture 'Deep sea ecosystems' in the MSc course "Benthic ecosystems' at the University of Amsterdam, 4 December.

Van Slooten, C., Peperzak, L. Ships and invasive species: Ballast water treatment techniques, efficacies and novel rapid methods to assess discharge water quality. Marine Invasive Species: Management of Ballast Water and Other vectors, Muscat, Sultanate of Oman, 17-19 February.

van Soelen, E., Santos, R.V., Hoorn, C., Sinninghe Damsté, J.S., Kim, J-H. Paleo-environment in the Upper Amazon basin during early to middle Miocene. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Vasquez-Cardenas, D., Malkin, S., van de Vossenberg, J., Polerecky, L., Schauer, R., Middelburg, J.J., Meysman, F., Boschker, H.T.S. Microbial communities and carbon metabolism associated with electrogenic sulfur oxidation in coastal sediments. 15th International Symposium on Microbial Ecology (ISME 15), Seoul, South-Korea, 24-25 August.

Vasquez-Cardenas, D., Meysman, F.J.R., Boschker, H.T.S. Dark carbon fixation in coastal sediments. Darwin Center, NESSC & SIAM Days, Noordwijkerhout, 20-21 November.

Villanueva, L., Schouten, S., Sinninghe Damsté, J.S. Depth-related distribution of a key gene of the GDGT biosynthetic pathway in marine Thaumarchaeota and implications for the GDGT signal. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Vogels, S.A., Ganssen, G.M., Brummer, G.J.A. Effect of seasonal acidification on the calcification of Globigerinoides ruber sensu stricto and Globigerina bulloides. Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April

Warden, L., Sollai, M., Mets, A., Bale, N., Hopmans, E., Moros, M., Sinninghe Damsté, J.S. Determining the predominant cause of anoxia in the Baltic Sea over the Holocene. Gordon Research Seminar on Organic Geochemistry, Holderness School Plymouth, NH, USA, 2-3 August.

Weber, Y., De Jonge, C., Hopmans, E.C., Sinninghe Damsté, J.S., Gilli, A., Lehmann, M.F., Niemann, H. In situ production of branched GDGT in lakes: New insights from sediments and soils of the Swiss Alps. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Weber, Y., De Jonge, C., Hopmans, E.C., Sinninghe Damsté, J.S., Gilli, A., Lehmann, M.F., Niemann, H. Lipid-based palaeotemperature reconstruction in lakes: New insights on the applicability of branched GDGTs in lacustrine sedimentary archives. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Welsh, J.E., van der Meer, J. Brussaard, C., Thieltges, D.W. Biodiversity & Disease Risk: If only it were so simple! 7th International Symposium on Aquatic Animal Health. Portland, Oregon, USA, 31-5 August.

Welsh, J.E., van der Meer, J., Brussaard, C., Thieltges, D.W. Biodiversity & Disease Risk: If only it were so simple! 49th European Marine Biological Symposium. St. Petersburg, Russia, 8-12 September.

Wernand, M.R., Aquarelleren met Poseidon – kleur de zee. World Ocean Day 2014, NIOZ Texel, June 7.

Werne, J., Woltering, M., Halbur, J., Sinninghe Damsté, J., Schouten, S., Munoz-Ucros, J. Hicks, R. Why does the TEX_{86} seem to work in sediments of Lake Malawi? Goldschmidt Conference, Sacramento, USA, 8-13 June.

Werne, J.P., Woltering, M., Halbur, J., Sinninghe Damsté, J.S., Schouten, S., Munoz-Ucros, J., Hicks, R., Loomis, S., Caballero, M., Lozano-Garcia, S., Correa-Metrio, A. Applications of GDGTS as paleothermometers in lakes. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Wijnholds, A., Stal, L.J., Increasing the lipid production of *Phaeodactylum tricornutum*. InteSusAl project meeting, Olhão, Portugal, 21-22 October.

Wijnhoven, S. Identifying the gap between the rivers and the sea. Invited speaker at SEFINS Cluster Conference 2014; 'Bridging the Gap: Working together to tackle invasive non-native species in Europe', Norwich, UK, 24 September.

Wijnhoven, S. Mesozoöplankton; Resultaten MONEOS Westerschelde monitoring 2011-2013 in relatie tot de evaluatie van het Schelde-estuarium volgens de Evaluatiemethodiek. Invited speaker at MONEOS workshop, Roosendaal, 23 September.

Wu, Y., Goldstein, S.L., Pena, L.D., Hartman, A.E., Rijkenberg, M.J.A., de Baar, H.J.W. How Well Do Neodymium Isotopes Trace AMOC Mixing? A Test in the Southwest Atlantic. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Xie, R.C., Galer, S., Abouchami, W., Rijkenberg, M., De Jong, J. Cadmium isotope distribution along the western boundary of the South Atlantic. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Xie, R.C., Galer, S.J.G., Abouchami, W., A., R.M.J., de Jong, J., de Baar. Biogeochemical and circulation control on cadmium isotope distribution in the western South Atlantic. Aquatic Sciences, Portland, Orgenon, USA, 18-23 May.

Zaaboub, N., Bejaoui, B., Khalfallah, W., Rijkenberg, M.J.A. Phosphorus cycling in sediment gulf of Gabes (Eastern Mediterranean Sea, Tunisia) and Modeling of phosphorus dispersion. Challenger Society Conference, Plymouth, UK, 8-11 September.

Zetsche, E. Applications of digital holographic microscopy in the marine sciences. 2nd international workshop on "Microbial long-distance electron transport mediated by cable bacteria", Antwerp, Belgium, 27–30 October.

Zetsche, E. SNOW-FLOW: Characterizing flow and diffusion around and within marine snow aggregates as a function of porosity and TEP content. Seminar, Lovén Centre, Tjärnö, Sweden, 14 April.

Zhu, Z., Bouma, T.J., Cao, H., Ysebaert, T., Zhang, L., Herman, P.M.J. Seed dynamics in tidal salt marshes: identifying key factors: Governing seedling establishment of Spartina. 4th International Conference on Invasive Spartina, Rennes, France, 7-10 July.

Zhu, Z., Cozzoli, F., Ysebaert, T., Zhang, L., Herman P.M.J., Bouma, T.J. Physical force and ecosystem engineers can act in synergy in seed burial in tidal habitats. Coastal Ecology Workshop, Saint Malo, France, 28-30 October.

Technology: Designs, prototypes and patents

Wernand M.R., COmpact Remote Sensor for Aquatic Intelligent Radiometry (Corsair), low-cost 7-channel spectroradiometer for water color measurement – prototype.

Wernand M.R., Modern Forel-Ule Scale Toolkit for a simple determination and classification of the colour of natural waters. it includes the Modern Forel-Ule Scale with a colour palette of 21 different colour bars ranging from indigo-blue (index 1) via green (index 10) to cola-brown (index 21) and a Secchi Disk (30 cm in diameter)with an attachment mount to connect weight and rope. Commercially available and manufactured by ATELIER VIX, Amsterdam, http://forel-ule-scale.com/

Posters

Abril, G., Martinez, J.-M., Artigas, L.F., Moreira-Turcq, P., Benedetti, M.F., Vidal, L., Meziane, T., Kim, J.-H., Bernardes, M.C., Deborde, J., Lima Souza, E., Albéric, P., Landim de Souza, M.F., Roland, F. Wetlands as a large carbon source for inland waters. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Achterberg, E.P., Li, K., Gledhill, M., Rijkenberg, M. Influence of ocean acidification on trace metal speciation. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Avesaath, P. van , Engelberts, A., Hummel H. Scientific highlight: Tourism and the nuisance of Pacific oysters. Local stakeholders have taken up the battle, but not only with the oysters. Vectors GA meeting 18-19 November.

Bale, N., Hopmans, E., Villareal, T., Zell, C., Sinninghe Damsté, J., Schouten, S. Novel lipid biomarkers for past oceanic N_2 fixation. AGU Fall Meeting, San Francisco, California, USA, 15-19 December.

Bijl, P., Sluijs, A., Schouten, S., Brinkhuis, H., and a team of collaborators. Significant continental ice volumes on mid---Paleocene Antarctica? Latitudinal temperature gradients, sea level change and the carbon cycle. Climate and Biotic Events in the Paleogene. Ferrara, Italy, 1-6 July.

Bijl, P.K., Schouten, S., Pancost, R.D., Hollis, C.J., Pross, J., Contreras, L., Sluijs, A., Bendle, J.A.P., Huber, M., Brinkhuis, H. A summer bias in southern high latitude GDGT-based marine and terrestrial temperature proxies? Some new insights from terrestrial palynomorphs and climate model simulations. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Bijl, P.K., van der Werf, A., Schluepmann, H., Reichart, G.J., Brouwer, P., Nierop, K.G.J., Hellgardt, K., Brinkhuis, H. The potential of the fresh-water fern Azolla in aquatic farming systems. European Geosciences Union General Assembly 2014, Vienna, Austria, 27 April-2 May.

Bolhuis, H., Hörnlein, C., Cretoiu, M.S., Cardoso, D.C., Stal, L.J. The Genome of *Lyngbya aestuarii*: An ecological perspective. 9th European Workshop on Molecular Biology of Cyanobacteria (9EWMBC), Texel, 7-10 September.

Borges, A.V., Meysman, F.J.R., Darchambeau, F., Beulen, A., Roland, F., Harlay, J. CO_2, CH_4 and N_2O dynamics and fluxes in the brackish Lake Grevelingen (The Netherlands). EGU General Assembly 2014, Vienna, Austria, 7-12 April.

Boye, M., Dulaquais, G., Carton, X., Rijkenberg, M., de Baar, H. First assessment of the dissolved cobalt partitioning between the soluble and colloidal fractions in the upper westnorthern Atlantic. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Brenner, H., Braeckman, U., Le Guitton, U., Meysman, F.J.R. Alkalinity release from sediments and impact on the water column CO_2 system in the North Sea. Ocean Science Meeting, Honolulu, USA, 23-28 February.

Bruin, T.F. de. Data van een veranderende Noordzee. Noordzeedagen 2014, NIOZ, Texel, 2-3 October.
Burdorf, L.D.W., Malkin, S.Y., Seitaj, D., Meysman, F.J.R. The effect of oxygen availability on long distance electron transport. International colloquium on Low Oxygen Environments In Marine, Estuarine And Fresh Waters, Liege, Belgium, 5–9 May.

Cadée, G.C., Grazing periwinkles *Littorina littorea* produce holes in Pacific oyster shells. Annual meeting Palaeontological Association, Leeds, UK, 16-19 December.

Camalich, J., Svensson, E, IJsseldijk, L.L., Brasseur, S., Witbaard, R., Schouten, S. Using $\delta^{13}C$ and $\delta^{15}N$ to study dietary habits and migrational patterns of bow caught and stranded fin whales (*Balaenoptera physalus*) in the Netherlands. European Cetacean Society Conference, Liege, Belgium, 5-9 April.

Camalich, J., Svensson, E., IJsseldijk, L.L., Brasseur, S., Witbaard, R., Schouten, S. Bulk and amino acid stable isotope analysis of fin whale baleens. European Cetacean Society Conference, Liege, Belgium, 5-9 April.

Campbell, P.L., Prouty, N.G., Mienis, F. Insights of seasonal input of organic matter to deep-sea corals through biomarker analysis. Ocean Sciences Meeting 2014, Honolulu, Hawaii, USA, 23-28 February.

Campbell-Swarzenski, P.; Prouty, N.G.; Mienis, F.; Ross, S.W. Lipid biomarkers track changing organic matter loads to gulf of Mexico deep-water corals. ASLO, Honolulu, USA, 23-28 February.

Carreira, C., Staal, M., Middelboe, M., Brussaard, C.P.D. How viruses, chemical compounds and fungi shape microbial mats. ASLO Ocean Science Meeting, Hawaii, USA, 23-28 February.

Caulle, C., Koho, K., Mojtahid, M., Reichart, G.J., Jorissen, F. Live (Rose Bengal stained) foraminiferal faunas from the northern Arabian Sea: faunal succession within and below the OMZ. European Geosciences Union General Assembly 2014, Vienna, Austria, 27 April-2 May.

Chan Y.-C., Hassell C. J., Theunis P. Detecting spatial structures in shorebird populations from mark-resighting data. International Wader Study Group Annual Conference, Haapsalu, Estonia, 26-29 September.

Chivall, D., M'Boule, D., Heinzelmann, S.M., Kasper, S., Sinke-Schoen, D., Sinninghe Damsté, J.S., Schouten S., van der Meer, M.T.J. Towards a palaeosalinity proxy: hydrogen isotopic fractionation between source water and lipids produced via different biosynthetic pathways in haptophyte algae. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 3-8 August.

Cimatoribus, A., Drijfhout, S., den Toom, M., Dijkstra, H., Control of the Atlantic Meridional Circulation Stability by freshwater transport: a framework to interpret results from climate models. EGU 2014, Austria, 27 April-2 May.

Contreras Quintana, S., Werne, J., Brown, E., Halbur, J., Sinninghe Damsté, J., Schouten, S., Correa-Metri, A., Fawcett, P. Evaluating spatial heterogeneity and environmental variability inferred from branched glycerol dialkyl glycerol tetraethers (GDGTs) distribution in soils from Valles Caldera, New Mexico. AGU Fall Meeting, San Francisco, California, USA, 15-19 December.

Costa-Böddeker, S., Thuyên, L.X., van Gaever, P., de Stigter, H., Huy, H.D., Hoelzmann, P., Schwarz, A., Schwalb, A. Environmental assessment of a coastal zone in southern Vietnam: a multi-proxy approach. Vietnam colloquium, Leibniz Center for Tropical Marine Ecology, Bremen, Germany, 17 December.

Cretoiu, M.S., Berini, F., Kielak, A.M., Marinelli, F., van Elsas, J.D. Novel salt-resistant bacterial chitinase revealed by metagenomics. 15th International Symposium on Microbial Ecology (ISME 15), Seoul, South-Korea, 24 - 29 August.

Daggers, T.D., Herman, P.M.J., Kromkamp, J.C., Bouma, T.J., Van der Wal, D. Benthic diatoms as indicators for ecosystem structuring in tidal shallow waters. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

De Bar, M.W., de Nooijer, L.J., Schouten, S., Sluijs, A., Reichart, G-J. A 60 Myr sea surface temperature record of the Northern Atlantic Ocean using a multi-proxy approach (Bass River, NJ, USA). Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April and TMS joint Foraminifera and Nannofossil Spring Meeting 2014, Texel, 23-25 June.

De Jonge, C., Hopmans, E.C., Stadnitskaia, A., Schouten, S., Sinninghe Damsté, J.S. Novel branched glycerol dialkyl glycerol tetraethers: occurrence in the environment and implications for the palaeoclimate reconstructions. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 3-8 August.

De Lima Sobrinho, R., Zell, C.I., Kim, J-H., Abril, G., Moreira-Turcq, P., Mortillaro, J-M., Sinninghe Damsté, J.S., Corrèa Bernardes, M. Seasonal and spatial contrasts of sedimentary organic carbon in floodplain lakes of central Amazon basin. 12th Nederlands Aardwetenschappelijk Congres (NAC 12), Veldhoven, 8-9 April.

De Nooijer, L., Dijk, I.E.Y., Reichart, G.J. Ocean chemistry controls trends in foraminiferal mineralogy. European Geosciences Union General Assembly 2014, Vienna, Austria, 27 April-2 May.

De Paoli, H., van der Heide, T., Christianen, M., van de Koppel, J. Which mussel team is going to survive the terrible mudflat? Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

De Paoli, H., van der Heide, T., Christianen, M., van de Koppel, J. Don’t Panic, Organize, Can subtidal mussels be used to restore intertidal mussel beds? Benthic Ecology Meeting, Jacksonville, Floride, USA, 19-22 March.

Demopoulos, A., Robertson, C., Bourque, J., Mienis, F., Duineveld, G., Davies, A., Ross, S.W., Brooke, S. Distinct benthic community trends driven by particle transport and deposition in Mid-Atlantic Bight canyons, NW Atlantic. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Dessandier, P.A., Bonnin, J., Kim, J.H., Gremare, A., Deflandre, B., Sinninghe Damsté, J.S. Distribution of living benthic foraminifera off the Douro river (western Iberian margin): the importance of the terrestrial organic matter. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Feenstra, E., Vonhof, H., Mienis, F., Verdegaal, S., Reymer, J. Stable isotopes of fluid inclusions: a new method to ground truth climate archives in coral skeletons. 19th International Sedimentological Conference, Geneva, Switzerland, 18-22 August.

Frieling, J., Gebhardt, H., Adekeye, O., Akande, S., Reichart, G-J., Middelburg, J., Schouten, S., Matthew Huber, M., Sluijs, A. The Paleocene – Eocene Thermal Maximum: Temperature and ecology in the tropics. AGU Fall Meeting, San Francisco, California, USA, 15-19 December.

Frieling, J., Gebhardt, H., Adekeye, O.A., Akande, S.O., Reichart, G.J., Schouten, S., Sluijs, A. Absolute sea surface temperature of tropical oceans during the Paleocene-Eocene Thermal Maximum: TEX_{86} estimates supported by Mg/Ca and $\delta^{18}O$. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Gerla, D.J., Baussant, T., Van Oevelen, D. Sedimentation on cold water coral. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Grosse, J., Boschker, H.T.S. Response of phytoplankton to resource limitation – A compound specific isotope study on shifts in macromolecule biosynthesis. Ocean Science Meeting, Honolulu, HI, USA. 23-28 February.

Heinzelmann, S.M., Villanueva, L., Schouten, S., Sinnighe Damsté, J.S., van der Meer, M.T.J. D/H ratio of fatty acids as a tool to infer the metabolism of microbial communities. Gordon Research Conference on Marine Microbes, Waltham, MA, USA, 22-27 June.

Hopmans, E.C., De Jonge, C., Kim, J-H., Schouten, S., Sinninghe Damsté, J.S. Improved chromatography for GDGT based paleoproxies. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 3-8 August.

Hörnlein, C., Stal, L., Bolhuis, H. Rhythm on the beach. Coastal microbial mats and *Lyngbya aestuarii.* 9th European Workshop on Molecular Biology of Cyanobacteria (9EWMBC), Texel, 7-10 September.

Hörnlein, C., Stal, L.J., Bolhuis, H. Rhythm on the Beach: Metabolic Pathways in Coastal Microbial Mats. 9th European Workshop on Molecular Biology of Cyanobacteria (9EWMBC), Texel, 7-11 September.

Hummel, H. EurOcean2014: Connecting Science, Policy and People - Setting a seas and oceans research agenda for Europe. Poster presentations, “MARS: The European network of marine research institutes and stations” and “MARS – EMBOS: Towards a European Marine Observatory System”. CNR, Rome, Italy, 7–9 October.

Kandiano, E., van der Meer, M.T.J., Bauch, H., Fahl, K., Sinninghe Damsté, J.S., Schouten, S. Climatic implications of foraminiferal and biogeochemical reconstructions in the Nordic Seas during interglacial MIS 11c. The second PAST---Gateways Conference, Trieste, Italy, 23 -27 May.

Kasper, S., Castañeda, I., Tjallingii, R., Brummer, G.-J., Schneider, R., Sininnghe-Damsté, J.S., Schouten, S., van der Meer, M.T.J. Alkenone based constraints of the hydrological development in the Mozambique channel over the last 39,000 years EGU General Assembly, Vienna, Austria, 29 April.

Kim, J.-H., Buscail, R., Zell, C., Ludwig, W., Dorhout, D., Sinninghe Damsté, J.S. Sources of tetraether lipids at the land-ocean interface of two contrasting river systems (Amazon vs. Rhône): implications for the MBT/CBT proxy. 2014 Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Kim, J-H., Buscail, R., Fanget, A.S., Eyrolle-Boyer, F., Bassetti, M.A., Dorhout, D., Baas, M., Berné, S., Sinninghe Damsté, J.S. Impact of river channel shifts on tetraether lipids in the Rhône prodelta (NW Mediterranean): Implication for the BIT index as an indicator of paleoflood events. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Kromkamp J., Silsbe G. Automated FRRF measurements as alternative tool to measure phytoplankton primary production. Ocean Optics XII conference, Portland, Maine, USA, 26-31 October.

Lambelet, M., van de Flierd, T., Crocket, K., Rehkämper, M., Kreissig, K., Coles, B., Rijkenberg, M.J.A., Gerringa, L.J.A., van Aken, H., de Baar, H.J.W. The Neodymium isotopic composition of North Atlantic Deep Water - Revisited. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Lengger, S.K., Hopmans, E.C., Sinninghe Damsté, J.S., Schouten, S. Impact of oxic degradation and deep water column production on GDGT abundance and distribution in surface sediments in the Arabian Sea: Implications for the TEX_{86} paleothermometer. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Lo, V., Bouma, T., van Colen, C., Airoldi, L. Impacts of eutrophication on salt marsh ecosystem functioning in Grado Lagoon, Italy. First Mares Conference on Marine Ecosystems Health and Conservation, Olhão, Portugal, 17-21 November.

Lubsch, A, Timmermans, K.R. Van der Maarel, M. Seaweeds as a source of high-value products. Netherlands Biotechnology Conference, Ede, 27-28 May.

Maas, L. Experimental falsification of internal-tide-generation paradigm. Hydralab IV closing event, Lisbon, Portugal, 1-5 July,

Malkin, S.Y., Rao, R., Meysman, F. J. R. Cutting the wire: Bioturbation impedes electrogenic sulphur oxidation. Goldschmidt Conference, Sacramento, USA, 8–23 June.

Mezger, E.M., De Nooijer, L.J., Dueñas-Bohórquez, A., Reichart, G.J. Sodium in foraminiferal calcite as a direct proxy for salinity. The Micropaleontological Society Joint Foraminifera and Nannofossil Groups Spring Meeting, Texel, 23-25 June.

Mezger, E.M., De Nooijer, L.J., Reichart, G.J. Sodium in foraminiferal calcite as a direct proxy for salinity. Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April.

Mienis, F. Bigger is not always better; How cold-water corals outgrow themselves, Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April.

Mienis, F. Duineveld, G.; Robertson, C.; Demopoulos, A.; Davies, A. Particle transport and deposition in the Norfolk and Baltimore canyon, NW Atlantic, Ocean Sciences Meeting 2014, Honolulu, Hawaii, USA, 23-28 February.

Mojica, K.D.A., Brussaard, C.P.D. The influence of water column stratification on the flow of C thru the viral shunt in marine food webs of the Northeast Atlantic Ocean. ASLO Ocean Science Meeting, Hawaii, USA, 23-28 February.

Moons, J.J.S., Ysebaert, T., Herman, P.M.J. Zand erover: Benthic bio-geomorphology of the sandy shoreface. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February and Congres Zandmotor Delflandse Kust, Den Haag, 31 March.

Moore, E.K., Hopmans, E.C., Rijpstra, W.I.C., Villanueva, L., Mets, A., Dedysh, S.N., Sinninghe Damsté, J.S. Abundant trimethylornithine lipids and specific gene sequences suggest Planctomycetes importance at the oxic/anoxic interface in *Sphagnum*-dominated northern wetlands. KNVM 2014, Papendal, 15-16 April.

Moore, E.K., Hopmans, E.C., Villanueva, L., Rijpstra, W.I.C., Dedysh, S.N., Wienk, H., Schoutsen, F., Stams, A.J.M., Sanchez Andrea, I., Mets, A., Sinninghe Damsté, J.S. Novel amino acid-containing membrane lipids in northern wetland planctomycetes and soil bacteria: Potential biomarkers for microbial populations. Gordon Conference on Organic Geochemistry 2014, Holderness, NH, USA, 3-8 August.

Moreira, L., Moreira-Turcq, P., Kim, J-H., Turcq, B., Cordeiro, R.,Caquineau, S., Sinninghe Damsté, J.S. A mineralogical and organic geochemical overview of the effects of Holocene changes in Amazon River flow on floodplain lakes. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Nauw, J. J., Linke, P., Leifer, I. Bubble momentum plume as a mechanism for an early breakdown of the seasonal stratification in the northern North Sea, NCK days, Delft, 27-28 March and . European Geosciences Union General Assembly 2014, Vienna, Austria, 27 April-2 May.

Nauw, J. J., Philippart, C. J. M. Duran-Matute, M., Gerkema, T. Estimates of exposure times in the Wadden Sea using contrasting methods, NCK days, Delft, 27-28 March.

Nierop, K., Sap, M., Dekker, R., Speelman, E.N., Lewan, M.D., de Leeuw, J.W., Reichart, G-J. Temperature induced transformations of *Azolla* specific biomarkers by hydrous pyrolysis. 12th Nederlands Aardwetenschappelijk Congres (NAC 12), Veldhoven, 8-9 April.

Nierop, K.G.J., Jongerius, A.L., Bijl, P.K., Bruijnincx, P.C.A., Klein Gebbink, R.J.M., Reichart, G.J. The potential of the aquatic water fern *Azolla* within a biobased economy. European Geosciences Union General Assembly 2014, Vienna, Austria, 27 April-2 May.

Nieuwhof, S., de Stigter, H., Busink, S., Herman, P.M.J., van der Wal, D. Bioturbators vs Biostabilizers; Opposite Worlds? Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

O'Connor, P., Brussaard, C.P.D. The impact of viruses on phytoplankton dynamics in the North Sea. ASLO Ocean Science Meeting, Hawaii, USA, 23-28 February.

Oteman, B., van der Wal, D., Bouma T.J., Herman, P.M.J. Salt marsh development observed from space. European Workshop of Coastal Ecology, Saint Malo, France, 28-30 October.

Oudman, T., Hin, V., van Gils, J.A. The effect of diet choice behaviour on prey populations (1st poster prize). Annual NVG-meeting (Netherlands Society for Behavioural Biology), 26-28 November.

Peeken, I., Bakker, K., Fernández Méndez, M., le Guitton, M., Uhlig, C. Will sea-ice thinning as in 2012 promote sea-ice algal growth? Ocean Sciences Meeting 2014, Honolulu, Hawaii, USA, 23-28 February.

Rampen, S.W, Rodrigo-Gámiz, M., Schrader, C.D., Schouten, S., Sinninghe Damsté, J.S. Impact of oxic degradation on long chain alkyl diol proxies. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 3-8 August.

Randlett, M.-E., Bechtel, A., van der Meer, M., Peterse, F., Litt, T., Pickarski, N., Wehrli, B., Schubert, C.J. D/H-isotopes of n-alkanes as indicator for porewater salinity variations in Lake Van (Eastern Anatolia, Turkey). Genomes to Biomes, Montreal, Canada, 25-29 May.

Rao, A.M., Malkin, S.Y., Meysman, F.J.R. Enhanced alkalinity production in intertidal sands from the Oosterschelde (the Netherlands) induced by the lugworm *Arenicola marina*. Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Reichart, G-J., de Bar, M.W., de Nooijer, L.J., Schouten, S., Ziegler, M., Sluijs, A. A 60 Myr sea surface temperature record of the Northern Atlantic Ocean using a multi-proxy approach. AGU Fall Meeting, San Francisco, California, USA, 15-19 December.

Roark, E.B., Prouty, N.G., Davies, A.J., Demopoulos, A., Mienis, F. Using water column characteristics to better understand the cycling of dissolved and particulate matter in Norfolk and Baltimore Canyons. Ocean Sciences Meeting 2014, Honolulu, Hawaii, USA, 23-28 February.

Rodrigo-Gámiz, M., Calvo, E., Rampen, S.W., Pelejero, C., Cacho, I., Schouten, S., Sinninghe Damsté, J.S. A multi-organic proxy approach for reconstructing sea surface temperatures in the Eastern Equatorial Pacific over the last 40 kyr. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Rolison, J.M., Middag, R., Stirling, C.H., Rijkenberg, M.J.A., de Baar, H.J.W. MedBlack GEOTRACES Expedition: Distribution of dissolved Aluminium. Ocean Sciences Meeting, Honolulu, Hawaii, 23-28 February.

Rolison, J.M., Middag, R., Stirling, C.H., Rijkenberg, M.J.A., de Baar, H.J.W. Dissolved Trace Metal Distributions in the Mediterranean Sea: Results from the MedBlack GEOTRACES Expedition. Goldschmidt Conference, Sacramento, California, USA, 8-13 June.

Salabarnada, A., Escutia, C., Nelson, H., Damuth, J.E., Brinkhuis, H. Varying depositional environments across the Oligocene-Miocene boundary and their relevance for East Antarctic ice sheet history: IODP Site U1356, Wilkes Land margin. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Seitaj, D., Malkin, S., Meysman F.J.R. Microbial sulphide oxidation in seasonally hypoxic coastal sediments: competition between electrogenic filamentous bacteria and beggiatoa. Ocean Science meeting, Hawaii, 23-28 February.

Soetaert, K. Benthic-Pelagic coupling in the Black Sea northwestern shelf by Arthur Capet et al. European Geosciences Union General Assembly 2014, Vienna, Austria, 7-12 April.

Soetaert, K. Internanual variability of the biogeochemical fluxes in the deep water formation area in the northwestern Mediterranean Sea from a 3D coupled physical-biogeochemical model by Caroline Ulses et al. European Geosciences Union General Assembly 2014, Vienna, Austria, 7-12 April.

Soissons, L.M., Li, B., Han, Q., van Katwijk, M.M., Ysebaert, T., Herman, P.M.J., Bouma, T.J. A Seagrass tale: The Fast and the slow growing. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Soissons, L.M., Li, B., Han, Q., van Katwijk, M.M., Ysebaert, T., Herman, P.M.J., Bouma, T.J. A Seagrass tale: The Fast and the slow growing. Seagrasses in Europe: Threats, Responses and Management conference, Olhão, Portugal, 4-6 March.

Sollai, M., Warden, L., Bale, N.J., Hopmans, E.C., Mets, A., Moros, M., Sinninghe Damsté, J.S. Heterocyst glycolipids as tracers of cyanobacterial blooms in the Baltic Sea. A proxy to reconstruct a possible trigger of anoxic events. The 46th International Liege Colloquium, Liège, Belgium, 5-9 May.

Stal, L.J., Fan, H., Bolhuis, H. The nitrogen cycle in a coastal microbial mat. 15th International Symposium on Microbial Ecology (ISME 15), Seoul, South Korea, 24-29 August.

Stal, L.J., Fan, H., Bolhuis, H. The nitrogen cycle in a microbial mat. 15th International Symposium on Microbial Ecology (ISME 15), Seoul, South Korea, 24-29 August.

Stal, L.J., The rate of gas influx into the heterocysts of a thermophilic cyanobacterium, *Fischerella*, is regulated. 9th European Workshop on Molecular Biology of Cyanobacteria (9EWMBC), Texel, 7-11 September.

Steenhauer, L.M., Brussaard, C.P.D., Pollard, P.C. Viral dynamics in relation to bacterial and cyanobacterial hosts in a subtropical reservoirs system. ICHA-16th International Conference on Harmful Algae, Queensland, Australia, 27-31 October.

Steinhardt, J., Cléroux, C., Ullgren, J., De Nooijer, L., Durgadoo, J.V., Brummer, G-J.A., Reichart, G.J. Reconstructing eddies using Mg/Ca of multiple species of planktonic foraminifera. AGU Fall Meeting, San Francisco, USA, 15-19 December.

Steinle, L., Felber, N., Casalino, C., de Lange, G.J., Lehmann, F.M., Stadnitskaia, A., Sinninghe Damsté, J.S., Tessarolo, C., Treude, T., Zopfi, J., Niemann, H. Methanotrophy and sulfate reduction at the interface between Mediterranean seawater and the MgCl2-dominated Kryos brine basin. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Svensson E., Schouten, S., Hopmans, E.C., Middelburg, J.J., Sinninghe Damsté, J.S. The $\delta^{15}N$ of bacterial membrane lipids. Ocean Science meeting, ASLO conference, Honolulu, Hawaii, 23-28 February and Advances in Stable Isotope Techniques and Applications (ASITA) conference, UC Davis, CA, USA, 15-18 June.

Svensson, E., Schouten, S., Hopmans, E.C., Middelburg, J.J., Sinninghe Damsté, J.S. Compound-specific nitrogen isotope analysis of nitrogen-containing membrane lipids and their biosynthetic amino acid precursors. ASITA Conference 2014, Davis, USA, 15-18 June.

Timmermans, K.R. Duurzame zeewierteelt op de Noordzee. Isea conferentie, Amsterdam, 13 May.

Timmermans, K.R., Ruardij, P. "ERSEM: estimating potential for culturing seaweed, North Sea days, Texel, 2-3 Oktober.

Van Belzen, J., Nieuwhof, S., Folmer, E.O., Cozolli, F., van de Koppel, J., Herman, P.M.J., Bouma, T.J. To tip or not to tip? That is the question. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Van Bijsterveldt, C.E.J., Zetsche, E., Meysman, F.J.R. Long-range electoral communication turns surface layer of marine sediments into a super biofilm. Biofilms 6 conference, Vienna, Austria, 11-13 May.

Van Bree, L.G.J., Rijpstra, W.I.C., Cocquyt, C., Al-Dhabi, N.A., Verschuren, D., Sinninghe Damsté, J.S., de Leeuw, J.W. Origin and palaeo-environmental significance of C_{25} and C_{27} *n*-alk-1-enes in a 25,000-year lake-sedimentary record from equatorial East Africa. Gordon Conference on Organic Geochemistry 2014, Holderness, NH, USA, 3-8 August.

Van der Does, M., Korte, L.F., Munday, C., Brummer, G.-J.A., Stuut, J.-B.W. Saharan Dust and its relations to climate. DUST 2014 International Conference on Atmospheric Dust, Castellaneta Marina (TA), Italy, 1-6 June and Nederlands Aardwetenschappelijk Congres 12, Veldhoven, 8-9 April.

Van der Meer, M.T.J., Benthien, A., French, K.L., Epping, E., Zondervan, I., Reichart, G-J., Bijma, J., Sinninghe Damsté, J.S., Schouten S. Large effect of irradiance on hydrogen isotope fractionation of alkenones in *Emiliania huxleyi*. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 3-8 August.

Van der Wal, D., Bouma, T.J., Morris, E.P., Gómez Enri, J., Peralta, G., Benevente, J., de Vries, M., van Wesenbeeck, B., Hendriksen, G., Moeller, I., Spencer, T., Stanica, A., Smith, G. Foreshore Assessment using Space Technology. Sentinel-2 for Science Workshop, ESA-ESRIN, Frascati, Italy, 20-22 May.

Vasquez-Cardenas, D., Malkin, S., Polerecky, L., Meysman, F.J.R., Boschker, H.T.S. Carbon metabolism in hypoxic sediments showing long-range microbial electron transport by cable bacteria. ASLO conference, Honolulu, Hawaii, 23-28 February.

Vasquez-Cardenas, D., Malkin, S.Y., van de Vossenberg, J., Polerecky, L., Schauer, R., Hidalgo, S., Confurius-Guns, V., Middelburg, J.J., Meysman, F.J.R., Boschker, H.T.S. Microbial communities and carbon metabolism associated with electrogenic sulfur oxidation in coastal sediments. 15th International symposium on microbial ecology, Seoul, South-Korea, 24-29 August.

Veenstra, T.J.T., Schouten, S., Dickens, G.R., Backman, J., Sluijs, A. Late Miocene-Early Pliocene productivity, temperature and upwelling in the Eastern Equatorial Pacific. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Vellekoop, J., Smit, J., Sluijs, A., Brinkhuis, H., Esmeray-Senlet, S, van de Schootbrugge, B., Browning, J., Miller, K., Sinninghe Damsté, J.S.A 60 Myr sea surface temperature record of the Northern Atlantic Ocean using a multi-proxy approach. AGU Fall Meeting, San Francisco, California, USA, 15-19 December.

Vellekoop, J., Smit, J., Sluijs, A., Brinkhuis, H., Weijers, J.W.H., Schouten, S., Sinninghe-Damsté, J.S. GDGT-based temperature records across the K-PG boundary: warming, cooling…or both? Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Viada, S., Ross, S.W., Brooke, S., Baird, E., Davies, A., Duineveld, G., France, S., Howard, A., Mather, R., Mienis, F., Rhode, M., Roark, B., Robertson, C., Young, C. Atlantic Canyons - Pathways to the Abyss: A multidisciplinary study of submarine canyons off the U.S. middle Atlantic coast. INCISE Workshop, Edinburgh, UK, 29 September-1 October.

Warden, L., Moros, M., Sollai, M., Sinninghe Damsté, J. Exploring the relationship between sea surface temperature and organic carbon accumulation in the Baltic Sea using TEX_{86}-paleothermometry. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April.

Warden, L., Sollai, M., Mets, A., Bale, N., Hopmans, E., Moros, M., Sinninghe Damsté, J.S. Determining the predominant cause of anoxia in the Baltic Sea over the Holocene. Gordon Research Conference on Organic Geochemistry, Holderness School Plymouth, NH, USA, 3-8 August.

Warden, L., Sollai, M., Mets, M., Moros, M., Sinninghe Damsté, J. Reconstructing continental climate over the Baltic region during the Ancylus Lake phase using branched glycerol dialkyl glycerol tetraethers. Darwin Days 2014 Noordwijkerhout, 20-21 November.

Weber, Y., De Jonge, C., Rijpstra, W.I.C., Hopmans, E.C., Stadnitskaia, A., Schubert, C.J., Lehmann, M.F., Sinninghe Damsté, J.S., Niemann, H. Identification of a novel lipid biomarker in lake sediments: Implications for the aquatic production of branched GDGTs. Workshop GDGT-based proxies: State of the art and future directions, Texel, 23-25 April and European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Welsh, J.E., van der Meer, J. Brussaard, C., Thieltges, D.W. Biodiversity & Disease Risk: If only it were so simple! 49th European Marine Biological Symposium. St. Petersburg, Russia, 8-12 September.

Wernand, M.R., Novoa, S., Participatory science and the color of natural waters; connecting past and present, Ocean Optics XXII Conference, Holiday inn by the bay, Portland, Maine, US, October 26–31.

Wijnhoven, S., Escaravage, V., Avesaath, P. van, Hummel, H. Exotic species in the Dutch delta waters. Poster pitch presentation at Science for the new regulation - BENELUX conference on invasive species, Ghent University, Gent, Belgium, 2 April

Zell, C., Kim, J-H., Balinsha, M., Dorhout, D., Santos Fernandez, C., Baas, M., Sinninghe Damsté, J.S. Transport of branched tetraether lipids from the Tagus River basin to the coastal ocean of the Portuguese margin: Consequences for the interpretation of the MBT'/CBT paleothermometer. European Geosciences Union, General Assembly 2014, Vienna, Austria, 27 April-2 May.

Zetsche, E., Meysman, F.J.R. Abundance and distribution of non-living organic matter in coral reefs. Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February.

Zhu, Z., van Belzen, J., Ysebaert, T., Herman, P.M.J., Bouma, T.J. The role of ragworm in pioneer seedling establishment in salt marshes. Netherlands Annual Ecology Meeting, Lunteren, 11-12 February.

Prizes

Burdorf, L.D.W. Jacques Nihoul PhD Student Poster prize, International colloquium on Low Oxygen Environments In Marine, Estuarine And Fresh Waters, Liege, Belgium, 5–9 May.

Chan Y.-C., Hassell C. J., Theunis P. Detecting spatial structures in shorebird populations from Oudman, T., Hin, V., van Gils, J.A. The effect of diet choice behaviour on prey populations (1st poster prize). Annual NVG-meeting (Netherlands Society for Behavioural Biology), 26-28 November.

De Bruin, T.F. In recognition of the contribution to ICES as Chair of the Workshop on ICES Data Guidelines (WKIDG) in 2014. 1 December 2014. Paul L. Connolly, ICES President, ICES Service Award

De Paoli, H. 1st presentation price, NIOZ Science days, Texel, 4-5 June.

Camphuysen, C.J., Kloff, S., Marret, F., ould Ahmed, M., Taleb Sidi, M.O. The charismatic megafauna in the upwelling zone off Mauritania: a conservation concern. Oral presentation "Ecosystemic Seabird/Fishery interactions in West African Waters", special session during the first International conference "Ecosystem Approach to the Management of Fisheries and the Marine Environment in West African Waters (AWA)", to be held 9th-11th December . in Dakar, Senegal. (1st prize in oral presentation competition of side sessions)

Liu, Q-X. Chinese government award, June.

Rabitti, A., Winner of the first edition of “I’m a Geoscientist, Get me out of here”, a free online event where school students get to meet and interact with geoscientists. “I’m a Geoscientist” is funded by the European Geoscience Union (EGU). http://imageoscientist.eu/

Sinninghe Damsté, J.S. Dr. A.H. Heinekenprijs voor de Milieuwetenschappen.

Timmermans, K.R., BAD award; 25000 euro, art project with artist Spela Petric: Naval Gazing, on exhibit in museum MU, Eindhoven, The Netherlands, 28 november.

Zhu, Z. 1st Prize of flash presentation, NIOZ Science Days, Texel, 4-5 June.

Special achievements

The Monitor Taskforce passed the reassessment of the ISO/IEC 17025:2005 accreditation by the RvA (Raad van Accreditatie) in March.

The Monitor Taskforce passed the reassessment of the NEN-EN-ISO 9001:2008 certification by KIWA in November.