

# External Projects Biological Oceanography

- Activity, rates, carbon use and high-pressure microbial ecology of the deep sea (ARCHIMEDES, NWO/ALW).  
*T. Reinthaler, G.J. Herndl, H.M. van Aken (FYS) and H. Boekel (MTI)*
- Pelagic Archaea in the changing coastal Arctic (PACCA, NWO/ALW – IPY).  
*E. Sintès and G.J. Herndl*
- Prokaryotic activity in the North Atlantic deep waters assessed by MICRO-CARD-FISH in relation to bulk activity (PROACTINOR, Marie Curie Fellowship, EU).  
*M.M. Varela and G.J. Herndl*
- Prokaryotic activity and phylogeny of oceanic systems (PAPHOS, Marie Curie Fellowship, EU).  
*H. Agogue and G.J. Herndl*
- Microbial diversity and ecosystem functioning: concepts, open questions and recommendations for integration of microbes into general ecological frameworks (Responsive Mode Project, Network of Excellence, MARBEF, EU).  
*G.J. Herndl, in cooperation with Baltic Sea Institute, Warnemünde (Germany)*
- Role of Saharan dust input on DOM cycling in nitrogen- vs. phosphorus-limited systems: a comparison between the subtropical North Atlantic and the Eastern Mediterranean Sea (Network of Excellence EurOceans, EU).  
*G. Spyres and G.J. Herndl, in cooperation with University of the Aegean, Lesvos (Greece)*
- Microbial Population Structure of the World's Oceans (W. & M. Keck Foundation, USA).  
*M. Brink and G.J. Herndl, in cooperation with Josephine Bay Paul Center for Comparative Molecular Biology and Evolution, Marine Biology Laboratory, Woods Hole (USA)*
- Influence of deep ocean viruses on prokaryotes (VIPeR, NWO-ALW).  
*T. Reinthaler, D. de Corte and G.J. Herndl, in cooperation with Earth and Ocean Sciences, University of British Columbia, Vancouver (Canada)*
- Molecular microbiological approach to the ocean biogeochemistry (Japan Society for the Promotion of Science).  
*T. Yokokawa and G.J. Herndl*
- Reducing the spread of invasive organisms by treating ballast water in ships (various industrial funds).  
*F. Fuhr and M.J.W. Veldhuis*
- Virus control of the picophytoplankter *Micromonas pusilla* population dynamics in European waters (MICROVIR, ALW-NWO).  
*J. Martinez Martinez and C.P.D. Brussaard*
- Fast Advanced Cellular and Ecosystems Information Technologies (FACEiT, 6<sup>th</sup> FWP EU).  
*L. Peperzak and C.P.D. Brussaard*
- The significance of viruses for polar marine ecosystem functioning (VIRPOL, IPY-NL).  
*C. Evans and C.P.D. Brussaard*
- Whole genome sequencing of a *Phaeocystis globosa* virus (GENOSCOPE, France).  
*C.P.D. Brussaard, in cooperation with Structural & Genomic Information Lab, Marseille (France)*
- Comparative genomic analysis of viruses infecting *Phaeocystis globosa* and *Micromonas pusilla*, two eukaryotic microalgae of global distribution (US-DOE JGI, USA).  
*C.P.D. Brussaard, in cooperation with University of Delaware (USA)*
- Rapid development of an ecosystem/ecological modelling capacity on the North Sea (DEFRA, London, UK).  
*P. Ruardij, in cooperation with Centre for Environment, Fisheries & Aquaculture Science (Cefas), Lowestoft (UK)*
- Effect of phosphate additions on fish production (Ministry of Agriculture, Nature and Food Quality, The Hague).  
*P. Ruardij*
- Marine Ecosystem Connections, southern North Sea. Subproject: secondary production by crustaceans (MEC, NWO-ALW 835.20.041).  
*S.S. Oosterhuis and M.A. Baars, in cooperation with Centre for Environment, Fisheries & Aquaculture Science (Cefas), Lowestoft (UK)*
- Towards Remote Sensing supported Monitoring of the North Sea (ToRSMoN, NIVR AGI 53515).  
*M.A. Baars, in cooperation with National Institute for Coastal and Marine Management (RWS RIKZ), The Hague*
- Sustainable production, physiology, oceanography, natural products, genetics and economics of sponges (Sponges, 6<sup>th</sup> FWP EU).  
*F.C. van Duyl, in cooperation with Institute for Physiological Chemistry, Mainz (Germany)*
- Biodiversity and ecosystem functioning of deep water coral reefs in the Mediterranean Sea and the NE Atlantic (NWO-ALW).  
*C. Maier and F.C. van Duyl*

- Dissolved organic matter cycling on coral reefs: Are coral cavities sinks of DOM? (NWO-WOTRO).  
*J.M. de Goeij and F.C. van Duyl*
- Health status of coral reefs along the east coast of Kalimantan (Indonesia (NWO-WOTRO).  
*M. Nugues (MEE), F.C. Van Duyl and R.P.M. Bak (MEE)*
- The role of native and/or invasive ecosystem engineers in explaining biodiversity (Responsive Mode Project, MARBEF, 6<sup>th</sup> FWP EU).  
*F.C. van Duyl*
- CARBOOCEAN (Integrated Project 6<sup>th</sup> FWP of EU).  
*H. Zemmeling and H.J.W. de Baar*
- Prominent uptake of anthropogenic CO<sub>2</sub> by the Southern Ocean via Antarctic Intermediate Water (NWO-ALW).  
*H. Zemmeling and H.J.W. de Baar*
- IPY GEOTRACES (NWO-ALW, NAAP).  
*H.J.W. de Baar*
- Kinetic reactivity of dissolved Fe species in seawater determine the availability of Fe for phytoplankton. (sub-project GEOTRACES, NWO-IPY).  
*C.-E. Thuroczy, L.J.A. Gerringa and H.J.W. de Baar, in cooperation with Alfred Wegener Institute, Bremerhaven (Germany)*
- Dissolved Aluminium and Manganese as Source Tracers for Iron in Polar Oceans (sub-project GEOTRACES, NWO-IPY, NWO-ALW).  
*R. Middag and H.J.W. de Baar*
- Physical and Chemical Speciation of Dissolved Fe in the Polar Oceans (subproject GEOTRACES, NWO-IPY, NWO-ALW).  
*C.-E. Thuroczy and L.J.A. Gerringa*
- CO<sub>2</sub> & ncp (BSIK).  
*M. Klunder and H.J.W. de Baar*
- Southern Ocean primary productivity in a high-CO<sub>2</sub> world (NWO-ALW, NAAP).  
*B. Bontes, K.R. Timmermans and H.J.W. de Baar, in cooperation with Groningen University, Haren*
- Improved quantification of Southern Ocean diatoms as indicators for Carbon Fixation (KERGUELEN, SRON).  
*M. Sligting, K.R. Timmermans, M.R. Wernand (FYS) and H.J.W. de Baar, in cooperation with Institute for Environmental Studies, Vrije Universiteit, Amsterdam*
- Ocean Carbon Cycle (NEBROC-2).  
*H.J.W. de Baar and L.J.A. Gerringa*
- Microbial carbon fixation in past and future high CO<sub>2</sub> oceans, sub-project "Interactions of zinc, iron and CO<sub>2</sub> system with polar oceans plankton in a high CO<sub>2</sub> world" (Darwin center – NIOZ).  
*A. Hoogstraten, K.R. Timmermans and H.J.W. de Baar*
- The UK SOLAS Deep Ocean gas Exchange Experiment (UK SOLAS NE/C001702/1).  
*H.J. Zemmeling, in cooperation with the University of East Anglia, Norwich (UK)*
- Time Series Measurements of Dimethyl Sulfide Dynamics at BATS.  
*H.J. Zemmeling, in cooperation with Woods Hole Oceanographic Institution (USA)*
- Carbon dioxide emission from a Dutch intertidal estuary (CARBOOCEAN and CarboEurope).  
*H.J. Zemmeling, in cooperation with Imares, Wageningen*