



Three open PhD positions in the project “WADDENSLEUTELS”

In the project “WADDENSLEUTELS” several Dutch nature conservation organizations and research institutes collaborate to address the basic threats to the Wadden Sea ecosystem, and to formulate recommendations for practical conservation methods that will preserve and restore the natural functioning and biodiversity of this unique ecosystem. The project is funded by the Dutch Waddenfonds. The Wadden Sea is the world’s largest soft-bottom intertidal ecosystem that hosts many unique species in high numbers, such as migratory waders that exploit the dense stocks of sediment-living worms, bivalves and crustaceans, but where important natural processes and organisms already have been lost and large threats to the future of the system now in place. The project aims to unravel key aspects of the spatially explicit food web of the Dutch Wadden Sea, with special attention to the role of ecosystem engineers (species that strongly modify their abiotic environment). Specifically, we will explore the role of intertidal mussel beds for food webs structure and diversity, and explore alternative methods how such mussel beds can be restored in places where they are lost. Final products of the project will be scientific publications on key drivers of the Wadden Sea ecosystem, spatially explicit recommendations on nature restoration potentials, evaluation of best practices for the restoration of intertidal mussel beds, and communication to policy makers, stakeholders and the general public on the results of the project.

The primary investigators that collaborate in this project are:

Prof. H. Oloff, Prof. T Piersma, Prof. J.P. Bakker, dr. B.K. Eriksson (University of Groningen, The Netherlands)

Prof. J.S. Sinninghe Damsté, Dr. H. van der Veer, Dr. S. Schouten (Netherlands Institute for Sea Research, Texel, The Netherlands)

Prof. J.J. Middelburg (Utrecht University)

Dr. M.P. Berg (Free University Amsterdam)

Dr. J. van de Koppel (Netherlands Institute of Ecology, Yerseke, The Netherlands)

The new personnel recruited by the project will consist of a coordinating postdoc (dr. T. van der Heide, Groningen), three PhD students (current open positions, two to be employed NIOZ Texel 1 and one at NIOO Yerseke), a coordinating technician (S. Holthuijsen, Texel) and a chemical analyst (Texel). These researchers will work closely together as a team on the project, by running joint field experiments and writing of collaborative papers.

We are currently looking for candidates for the following three open PhD positions in the project, two at NIOZ, Texel, The Netherlands and one at NIOO, Yerseke, The Netherlands. Note the differences in closing date for the different positions.



The Royal Netherlands Institute for Sea Research (NIOZ) is the leading research institute in the Netherlands for the basic marine sciences. Five departments (Physical Oceanography, Marine Geology, Marine Organic Biogeochemistry, Biological Oceanography and Marine Ecology) carry out the multidisciplinary research of the institute. Approximately 250 persons are currently appointed at the NIOZ. NIOZ has a large variety of instrumentation and is operating modernly equipped research vessels for coastal and ocean studies. NIOZ is located on the Wadden Island of Texel, close to the mainland. For further information see the NIOZ homepage at www.nioz.nl.

The departments of Marine Ecology (MEE; department chair Dr. Henk van der Veer) and Marine Organic Biogeochemistry (BGC; department chair Prof. Dr. Jaap Sinninghe Damsté), have vacancies for

Two PhD students at NIOZ, Texel vacancies 2010-050 and 2010-051

These PhD students will address specific topics in the multidisciplinary project, *Waddensleutels* to assess food web structure in the Wadden Sea intertidal as a function of the extent of ecosystem restoration, especially the (experimental) recovery of mussel beds and seagrass meadows. This project is funded by the Waddenfonds and is a cooperation between the University of Groningen, the Netherlands Institute for Ecology (NIOO), NIOZ and the Wadden-Sea-consortium of Dutch nature conservation organizations.

Project 1 (at MEE; vacancy 2010-051). We aim to use crustaceans (shrimp, shore crabs), fish (mullet) and birds (spoonbills) as indicator species, and stable isotopes as markers of trophic relatedness and trophic level, to assay food web structure across the entire Dutch Wadden Sea. The candidate is expected to develop and carry out a spatially explicit sampling program for these species and to design relevant field and laboratory experiments to verify the basic assumptions of the comparative observational approach using stable isotopic markers. The candidate will be part of a team including expert technicians and fellow PhDs studying additional aspects of the Wadden Sea food web. We are looking for an all-round natural historian with a strong modern research focus in marine ecology. Students demonstrating a fondness for working in a team, strong backgrounds in both spatial statistics and natural history (with work on invertebrates, fish and/or birds),

and clear affinities with the marine environment, are especially encouraged to reflect. We expect that the candidate will successfully complete a PhD thesis.

Project 2 (at BGC; vacancy 2010-050). We aim to develop methods based on (compound-specific) stable isotope (carbon, nitrogen, sulfur, hydrogen) techniques to better understand the origin of the organic matter that forms the base of the food-web of the Wadden Sea and to investigate if these isotopic signatures can be followed through the food chain. A central question will be how much organic matter produced by phytoplankton in the North Sea, terrestrial organic matter, and organic matter produced in situ in the tidal flat system by phytobenthos contribute to the overall food-web in the Wadden Sea. A new Elemental Analyzer (EA)-isotope ratio mass spectrometer (irmMS) and analytical support is available to perform this research. The candidate will be part of a team including expert technicians and fellow PhDs studying additional aspects of the Wadden Sea food web. We are looking for enthusiastic and creative persons with a degree in biology, geosciences, environmental science or chemistry. Experience with biogeochemistry or marine ecology and fluency in English are prerequisites. We expect that the candidate will successfully complete a PhD thesis.

Further information can be obtained for project one from Prof. Dr T. Piersma (0222-369485) & Dr ir. H.W. van der Veer (0222-369575) and for project two from Prof. Dr Sinninghe Damsté (tel. 0222-369550, e-mail: Jaap.Damste@nioz.nl) or Prof. Dr Jack Middelburg (UU) (tel. 030-2536220, e-mail: j.middelburg@geo.uu.nl).

We offer a full-time PhD position for 4 years, a pension scheme, a yearly 8% vacation allowance, year-end bonus and flexible employment conditions. Conditions are based on the Collective Employment Agreement of the Research Institutes.

Application:

Applicants should send a cover letter with motivation for this project, CV, a statement of research interest and the name and email address of two referees, to the Human Resources Department attended to Ms. Jolanda Evers, Royal Netherlands Institute for Sea Research (NIOZ), P.O. Box 59, 1790 AB Den Burg, Texel, The Netherlands or preferably by e-mail to: jobs@nioz.nl

Please quote the vacancy number in your application

Closing Date: August 15 2010 or until the qualified candidate is identified.



The **Netherlands Institute of Ecology** (NIOO) is a top research institute of the Royal Netherlands Academy of Arts and Sciences (KNAW). It has three locations: Nieuwersluis, Heteren and the Centre for Estuarine and Marine Ecology (CEME) in Yerseke. Mission of the

NIOO (<http://www.nioo.knaw.nl>) is to carry out excellent fundamental and strategic research in ecology.

The Department of **Spatial Ecology** of the Netherlands Institute of Ecology (NIOO-CEME) offers a

One PhD POSITION (M/F)
EXPERIMENTAL MARINE ECOLOGIST
Vacancy number CEME-RE-010502

The Department of Spatial Ecology of the Netherlands Institute of Ecology (NIOO-CEME) have received funding for a project involving a PhD position at the Centre of Estuarine and Marine Ecology in Yerseke, in collaboration with the Community and Conservation Ecology group of the University of Groningen.

Project 3 (at NIOO, vacancy CEME-RE-010502): Across the world, marine ecosystems are experiencing an accelerating loss of populations and species, with a strong risk of permanently impairing key ecosystem functions and recovery potential. In the Wadden Sea ecosystem, intensification of fisheries activities in combination with global change has led to the decline of permanent mussel beds, an important habitat for many species.

This project plans to investigate the factors that limit the establishment and persistence of mussel beds on intertidal flats in the Wadden Sea, using a combination of observational and experimental approaches.

The candidate will collaborate intensively within other PhD students and field assistants within the projects Waddensleutels and MusselWad, projects that are funded by the Waddenfonds.

Function description: The PhD student positioned at the NIOO-CEME will perform field studies on the factors that determine mussel beds dynamics, testing the general hypothesis that soft sediment accumulation within the mussel bed affects the stability and persistence of mussel beds. This hypothesis will be tested in experimental manipulations of artificial mussel beds, and by observations of existing mussel beds via remotely operated camera systems.

Requirements: We are looking for a highly motivated, enthusiastic and creative person with a degree in biology or environmental science, with experience and/or a clear interest in experimental marine ecology. The candidate must be able to design and carry out experiments, and to interpret the results statistically. Candidates should be capable to clearly report on their results in both English and Dutch, both orally and in writing. We expect that the candidate will successfully complete a PhD thesis. The candidate should be

prepared to independently conduct repeated field visits to mussel beds, some of which will involve prolonged stays at Wadden Sea islands. A drivers license is an important requirement.

Appointment: This is a temporary 1-year appointment that upon satisfactory evaluation will be prolonged for a maximum of 4 years total.

Salary: The gross salary starts at € 2.042,- per month in the 1st year, and will gradually increase to a maximum of € 2.612,- per month in the 4th year, scale P, Collective Agreement for Dutch Universities (CAO-Nederlandse Universiteiten), excluding 8% holiday pay and a year-end bonus. We offer an extensive package of fringe benefits.

Location: You will be working at the Centre for of Estuariene and Marine Ecology, Yerseke. The project involves an extensive visit to field sites in the Wadden sea.

Information: Additional information is available upon request from dr. Johan van de Koppel (tel: 0113- 577455 , e-mail: j.vandekoppel@nioo.knaw.nl). Information on the Netherlands Institute of Ecology (NIOO), can be found at <http://www.nioo.knaw.nl>.

Application: Applications with reference including CV and vacancy number should be addressed to Nederlands Instituut voor Ecologie (NIOO-CEME), Postbus 140, 4400 AC Yerseke or per e-mail receptie-ceme@nioo.knaw.nl) before July 31, 2010.

For more information see <http://www.nioo.knaw.nl/en/node/12>