

Danish Coastal Waters

Conference on significant factors controlling eutrophication in Danish coastal waters

19 JUNE 2013 - DGI-BYEN - COPENHAGEN
Kl. 9.00-16.30

Will further reduction in nitrogen improve the environmental status of coastal waters? Is phosphorus more important? Are there other stressors that have been overlooked in efforts to achieve good environmental status in Danish coastal waters? Leading researchers in the field will present and discuss their views at the conference 'Danish Coastal Waters' and we hereby invite you to participate.

The purpose of the conference is to give the participants a better understanding of what controls eutrophication in coastal waters, thus help qualify the national debate and create a better basis for revising regulation - and to identify areas where more knowledge is needed.

The agricultural sector has a vital interest in the topic and The Danish Agriculture & Food Council has requested the Knowledge Centre for Agriculture to organize this conference. Current legislation is costly for the sector and has so far not had the desired impact. However, more targeted and cost-efficient regulation could ensure both improved marine conditions and a more profitable agricultural production.

We have managed to gather a number of the most competent researchers in the field, and we are confident that their contributions will provide us with new knowledge and a good discussion - both at the conference but also in the future. You can find more information about the conference on the website.

We are looking forward to meeting you at the conference.

Carl Åge Pedersen, Director
Knowledge Centre for Agriculture, Crop Production



Programme

Welcome

Vice chairman Lars Hvidtfeldt, The Danish Agriculture & Food Council

Nitrogen and phosphorus in watercourses and loadings to coastal waters

MSc Biology Jørgen Windolf, Aarhus University

Nitrogen and phosphorus in drainage water

Chief Adviser Leif Knudsen, Knowledge Centre for Agriculture

Nutrient input from surrounding waters and the atmosphere

Effect on open areas and fjords

Chief Biologist Flemming Møhlenberg, DHI

Panel discussion and questions

What is the role of nitrogen, phosphorus and organic matter in sediment

Chief Biologist Erik Kock Rasmussen, DHI

Swedish experiences on the importance of N and P:

Are they relevant for Danish conditions?

Professor Ragnar Elmgren, Department of Ecology, Environment and Plant Sciences
Stockholm University

How does the N/P-ratio affect the ecological system?

Professor Patricia Glibert, University of Maryland (Videolink)

Should N or P be controlled in order to mitigate eutrophication

Professor Hans W. Paerl, Institute of Marine Sciences, The University of North Carolina at Chapel Hill

Recovery of marine ecosystems:

Regime shifts, resilience and shifting baselines

Professor Jacob Carstensen, Department of Bioscience, Marine Ecology, Aarhus University

Panel discussion and questions

Closing remarks

Vice chairman Lars Hvidtfeldt, The Danish Agriculture & Food Council

Conference Registration Fee: 975 DKK

[Register to the Conference](#)



MSc Jørgen Windolf, Department of Bioscience, Aarhus University. Freshwater biologist, MSc, from University of Copenhagen. Thirty years' experience with monitoring and management of the aquatic environment acquired through work at local, regional and most recently national level. Works with the national monitoring programme for the freshwater environment. Combined use of measurement data and simple models for calculation of freshwater runoff and input of nutrients to streams, fjords and coastal-near waters. Evaluation of the development and underlying reasons.



Chief adviser Leif Knudsen has been employed at the Knowledge Centre for Agriculture and worked within the fields of Fertilisation and Drainage since 1992. Over the years, Leif Knudsen has participated in and been the leader of numerous projects dealing with better nutrient utilisation and methods to reduce nitrogen loss in agriculture. For the last two years, nutrient contents in drainage water have been monitored. Furthermore, Leif Knudsen is responsible for calculating the economical optimal nitrogen standards.



Chief biologist Flemming Møhlenberg has been employed at the DHI Group since 1997. He is a professional marine ecologist who has more than 30 years of experience from long-term engagements at universities and the National Environmental Research Institute. During the last 20 years, he has worked with Danish monitoring data and has used this background in several data syntheses and to develop proposals for revision of monitoring programs. A coordinator and work package leader on national and international research projects. Over the past 3-4 years, he has been involved in baseline studies and EIA studies in connection with a fixed link across the Femern Belt, and in parallel has led EIA studies related to the expansion of aquaculture. Author and co-author of 50 scientific articles and a contributor to several books. Member of The Commission on Nature and Agriculture.



Chief biologist Erik Kock Rasmussen, DHI, has worked with ecological modeling of marine areas for 25 years and participated in EU or Danish funded marine research projects. Besides research projects he has participated as ecological modeler in several interdisciplinary international applied projects, like master plans (Brazil, Argentina, Chile, Bulgaria, Kaliningrad) or Environmental Impact Assessments (bridge, tunnels, power plants, marine wind mill farms).



Ragnar Elmgren is professor of Brackish Water Ecology at the Department of Ecology, Environment and Plant Sciences at Stockholm University. In 1976 he received his Ph.D. from Stockholm University for the thesis "Baltic Benthos Communities and the Role of the Meiofauna". In 1977-78 he studied the ecological effects of marine oil pollution at the Graduate School of Oceanography, University of Rhode Island. After returning to Stockholm University he has studied Baltic ecosystems, with an emphasis on bottom fauna, eutrophication effects, cyanobacterial blooms, and, increasingly, management issues and has supervised 20 Marine Ecology PhDs. His current research projects deal with adaptive management of nutrient discharges to the coastal zone, ecosystem effects of Baltic cyanobacterial blooms and ecosystem-based management of the Baltic Sea.



Patricia Glibert is a Professor at the University of Maryland Center for Environmental Science (UMCES), Horn Point Laboratory. She received her Ph.D. from Harvard University and was a Postdoctoral Scholar and an Assistant Scientist at the Woods Hole Oceanographic before moving to the University of Maryland. Dr. Glibert also holds an Honorary Doctorate from Linnaeus University, Sweden, and is a Fellow of the American Association for the Advancement of Science. Pat's research centers around questions related to nutrient dynamics, particularly the effects of eutrophication, and algal blooms. Her current work is focused on the linkages between changes in the amounts and forms of nutrient loading, harmful algal blooms (HABs), and changes in aquatic food web structure.



Hans W. Paerl is Kenan Professor of Marine and Environmental Sciences at the University of North Carolina's Institute of Marine Sciences. His research addresses nutrient cycling and primary production dynamics, environmental controls and management of harmful algal blooms, and assessing effects of human and climatic alterations of water quality and sustainability of inland and coastal waters. He received the 2003 G. Evelyn Hutchinson Award from the Association of the Sciences of Limnology and Oceanography, and the 2001 Odum Award from the Coastal and Estuarine Research Federation for addressing the causes, consequences and controls of eutrophication in aquatic ecosystems.



Jacob Carstensen is a professor at the Department of Bioscience, Aarhus University. He is an ecological statistician with over 20 years' research experience analysing environmental data. His research focuses mainly on describing and understanding long-term trends of marine ecosystems in response to natural and anthropogenic pressures, particularly eutrophication and climate change. He has worked on several projects supporting the implementation of European Directives (WFD, MSFD).

