



# BONUS

SCIENCE FOR A BETTER FUTURE OF THE BALTIC SEA REGION

INVITATION TO ECOSUPPORT & RECOCA STAKEHOLDER CONFERENCE:

## An outlook to the future Baltic Sea: how can we reach the targets of the Baltic Sea Action Plan?

Stockholm 7 December 2011

If we want to move towards a future Baltic Sea with eutrophication we must take actions to reduce nutrient loads. Climate change will come in as a player and will impact the Baltic Sea environment in various ways, e.g. enhance eutrophication.

The BONUS projects ECOSUPPORT and RECOCA will here present and discuss the outcomes of their 3-year research projects. Scenarios of different nutrient load management on sea and land, in present and future climate have been assessed in order to provide scientific background for ecosystem-based management. The conference will be an opportunity for scientists and stakeholders to discuss and evaluate the recent developments and insights and identify areas of uncertainties and needs of further investigation.



**Time:** Wednesday 7 December 2011 12.00-17.00, including lunch.

**Location:** "Geohuset", Stockholm University, Stockholm, Sweden

**Cost:** Free of charge

REGISTRATION BEFORE  
23 NOVEMBER TO:

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# Background

The Baltic Sea is presently under severe stress, experiencing e.g. eutrophication caused by excessive nutrient loads. Eutrophication results in enhanced phytoplankton production, reduced water transparency and ultimately hypoxia/anoxia. Combating eutrophication by nutrient reduction is vital in order to reach a healthier Baltic Sea.

The implementation of the eutrophication section within the HELCOM Baltic Sea Action Plan (BSAP) requires modelling tools to simulate the effects of various abatement strategies and to estimate the related costs.

RECOCA addresses this by simulating possible future riverine nutrient loads, estimating and suggesting cost effective reductions and allocation schemes of these loads for the riparian countries.

ECOSUPPORT has developed a multi-model system tool to assess the combined effect of climate change and nutrient loads to the Baltic Sea environment.

Data bases and models will allow managers and decision makers to view scenario analyses via Decision Support Systems.

Examples of the scientific outcome:

- Dramatic increases in fertilizer use and manure are likely to occur in exactly those areas where nutrient leakage is already most intense.
- Climate change will impact the Baltic Sea in several ways and these effects need to be taken into consideration in management plans.
- To reach HELCOM targets for a Baltic Sea unaffected by eutrophication, nutrient load reductions are of even higher importance in future climate than in present.
- The total costs of achieving BSAP targets would undoubtedly be lower if the cost-effectiveness of different measures were taken into account in the allocation of the country specific quotas.



# Agenda

## 12.00 Registration and lunch buffet

**12.45 Welcome:** Fredrik Wulff, Baltic Nest Institute, Stockholm University, Sweden and Pontus Matstoms, Swedish Meteorological and Hydrological Institute, Sweden

**13.00 HELCOM: Visions of a healthy Baltic Sea:** Gabriella Lindholm, Chair HELCOM, Swedish Ministry of the Environment, Sweden

**13.15 Introduction of RECOCA and ECOSUPPORT:** Christoph Humborg, Baltic Nest Institute, Stockholm University, Sweden and Markus Meier, Swedish Meteorological and Hydrological Institute, Sweden

**13.45 How did the Baltic Sea become eutrophic?** Bo Gustafsson, Baltic Nest Institute, Stockholm University, Sweden

**14.05 Baltic Vision—Visualisation of a future Baltic Sea environment:** Helén Andersson & Patrik Wallman, Swedish Meteorological and Hydrological Institute, Sweden

**14.25 Costs to reduce nutrient loads to the Baltic Sea - some scenarios:** Berit Hasler, Baltic Nest Institute, National, Environmental Research Institute, Aarhus University, Denmark

## 14.45 Coffee

**15.00 Agricultural hot spots of nutrient leakage in the Baltic Sea catchment:** Hans Estrup Andersen, Baltic Nest Institute, National, Environmental Research Institute, Aarhus University, Denmark

**15.20 New data from RECOCA available in the NEST data base for the Baltic Sea catchment:** Christoph Humborg and Alexander Sokolov, Baltic Nest Institute, Stockholm University, Sweden

**15.40 What science may and may not have to offer for the marine management:** Jan Marcin Weslawski, Institute of Oceanology, Polish Academy of Sciences, Poland

## 16.00 Discussion

## 17.00 Close of conference

Welcome!

Markus Meier & Fredrik Wulff

