



**Tellus - BALTEX Workshop on
Biogeochemical Land and Baltic Sea
Interactions driven by Climate and Land Use**

1 - 2 December 2008, University of Gothenburg, Sweden

The workshop aims at bringing together the terrestrial and marine biogeochemistry researchers, emphasizing on potential impacts on ecosystems due to global change, including climate and land use change. Special emphasis will be on biogeochemical cycles and processes affecting the matter fluxes from land to the Baltic Sea.



Different modelling approaches will be discussed. The coupling of regional climate models with biogeochemical models is a major challenge for the future to arrive at regional Earth System Models. These approaches will be compared with site specific models for the different ecosystems, focusing on how well they describe key biogeochemical processes in the matter flow.

The aim of the meeting is also to initiate a network of researchers that conduct biogeochemical process studies in terrestrial, limnic and marine ecosystems within the catchment area or in the Baltic Sea, and to foster multi-disciplinary research cooperation.

The workshop is intended to provide a platform for an open exchange of views and information. Therefore, ample time is allowed for open discussions during which 1-2 slides may be shown, as appropriate. Furthermore, participants are invited to show posters linked to the topic of the workshop.

TELLUS is a comprehensive research programme at the University of Gothenburg, dedicated to Earth systems science. The aim is to gain a deeper knowledge and understanding of the functioning of the principal Earth systems, how they are interacting and how this affects life on Earth.

BALTEX is an interdisciplinary research network for the Baltic Sea drainage basin. An important aspect of BALTEX is a holistic approach towards observing, understanding and modelling major environmental and socio-economic aspects relevant for the entire Baltic Sea basin. BALTEX research activities are thus contributing to the build-up of a high resolution integrated modelling capability for Northern Europe, embedded in an Earth System Model.

www.tellus.science.gu.se

www.baltex-research.eu



Workshop venue:
Wallenberg Conference Centre
of the University of Gothenburg
Hall "Lyktan"
Medicinaregatan 20 A
Gothenburg, Sweden

A dinner will take place on 1 December 2008 in the Wallenberg Centre, followed by an informal gathering in the Söderhavet Hall, Department of Earth Science, University of Gothenburg, Guldhedsgatan 5A, Gothenburg

A list of hotels is available on the TELLUS and BALTEX web sites.

The Workshop is free of charge.

**Please register until
21 November 2008 with**

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Monday, 1 December 2008

- 11:00-13:00 **Registration and Poster setup**
Chair: Jee-Hoon Jeong
- 13:00 **Introduction and presentation of Tellus centre**
Leif Klemetsson, Tellus Centre of Earth Systems Science, University of Gothenburg
- 13:30 **BALTEX - An evolving environmental research network for the Baltic Sea basin**
Joakim Langner, BALTEX Science Steering Group Chairman, Swedish Meteorological and Hydrological Institute, Norrköping
- 14:00 **Regional climate models and the coupling with marine biogeochemical models**
Markus Meier, Oceanographic Research, Swedish Meteorological and Hydrological Institute, Norrköping
- 14:40 **Coffee Break and Poster setup**
- 15:10 **Modelling terrestrial land cover and land use**
Benjamin Smith, Physical Geography and Ecosystems Analysis, Lund University
- 15:50 **Baltic Sea catchment modelling**
Christoph Humborg, Department of Applied Environmental Science, Stockholm University, and Baltic Nest Institute
- 16:30 **Modelling the coupling between biogeochemical and physical processes in terrestrial ecosystems**
Per-Erik Jansson, Department of Land and Water Resources Engineering, Royal Institute of Technology, Stockholm
- 17:10 **The role of the riparian zone for determining the carbon and solute export to surface water - Examples from the Krycklan catchment (northern Sweden)**
Hjalmar Laudon, Department of Forest Ecology and Management, Swedish Agriculture University, Umeå
- 17:50 **Open Discussion**
- 18:40 **Poster session**
- 19:00 **Dinner**
- 20:30 **Informal gathering at Söderhavet Hall**
Department of Earth Science, University of Gothenburg

Tuesday, 2 December 2008

- Chair: Madelene Ostwald*
- 9:00 **Phosphorus transport from terrestrial to limnic ecosystems**
Barbro Ulén, Department of Soil Sciences, Swedish Agriculture University
- 9:40 **Site and catchment modelling of phosphorus transport in terrestrial ecosystems**
Sirkka Tattari, Research Programme for Integrated River Basin Management, Finnish Environment Institute (SYKE), Helsinki
- 10:20 **Coffee Break**
- 10:50 **Transformations and loss of organic carbon en route from soil to sea**
Lars Tranvik, Department of Ecology and Evolution, Limnology, Uppsala University
- 11:30 **Chemical particle-solute interactions in limnic and marine ecosystems**
Martin Hassellöv, Department of Chemistry, University of Gothenburg
- 12:10 **Open Discussion**
- 12:40 **Lunch**
Chair: Anders Stigebrandt
- 13:30 **Biogeochemical C and P transformations in marine sediments and fixed N removal at the Baltic Sea water column oxic-anoxic interface**
Per Hall, Department of Chemistry, University of Gothenburg
- 14:10 **Biogeochemical N turnover in marine sediments**
Per Hall, Department of Chemistry, University of Gothenburg
- 14:50 **Coffee Break**
- 15:20 **Modelling the acid-base (pH) balance in the Baltic Sea**
Anders Omstedt, Earth Sciences: Oceanography, University of Gothenburg
- 16:00 **Processes determining Air-Sea exchange of CO₂ in the Baltic Sea**
Leif G. Anderson, Department of Chemistry, University of Gothenburg
- 16:40 **Open discussion**
- 17:30 **End of the workshop**