

Curriculum Vitae Prof. Dr. Markus Meier

Name: Hans Eberhard Markus Meier

Current employment: Head of the Department of Physical Oceanography and Instrumentation at the Leibniz Institute for Baltic Sea Research Warnemünde

Leibniz-Institut für Ostseeforschung Warnemünde

Seestraße 15

18119 Rostock, Germany

Tel.: ++49 381 5197 150

Fax: ++49 381 5197 440

E-mail: markus.meier@io-warnemuende.de

Main fields of current research

- numerical modeling of the Baltic Sea and Arctic Ocean
- sea ice modeling
- ice-ocean model inter-comparison
- sub-grid scale parameterizations (e.g. turbulence, gravity driven dense bottom currents) in ocean circulation models
- variational data assimilation using the adjoint method
- water exchange through straits
- reconstruction of Baltic Sea climate of the 20th century, paleoclimate studies
- climate variability and climate sensitivity of the Baltic Sea and Arctic Ocean
- detection and attribution of climate change
- dynamical downscaling using regional climate models
- scenario simulations for the Baltic Sea and impact studies (e.g. Baltic ringed seal populations, flooding, coastal erosion, and spatial development)
- ensemble technique for climate change scenario simulations
- atmosphere-ice-ocean interaction
- heat and water cycles in uncoupled and coupled atmosphere-ice-ocean models
- performance of massively parallel ocean codes
- coupled physical-biogeochemical modeling to study the marine ecosystem in past and future climates
- measures against eutrophication

Degrees and merits

- High School Certificate, Neumünster, Germany, November 1981
- Diploma in Physics (Experimental, Theoretical and Applied Physics, Astronomy, thesis at the Institute of Fundamental and Applied Nuclear Physics), University of Kiel, Germany, September 1989

- Doctor of natural science (Physical Oceanography, Physics and Theoretical Physics, thesis at the Department of Theoretical Oceanography, Institute of Marine Research), University of Kiel, July 1996
- Docent (associate professor) in physical oceanography, University of Göteborg, January 2005 (Docent lecture on “Användning av tredimensionella oceanmodeller för att simulera cirkulationen på olika tids- och rumsskalor - vad fungerar bra respektive mindre bra”)
- Professor at the Faculty of Science, Stockholm University, Stockholm University, April 2012
- Professor (chair) position for Physical Oceanography (W3) at the University of Rostock and head of the department Physical Oceanography and Instrumentation at the Leibniz Institute for Baltic Sea Research Warnemünde (IOW), Germany, October 2015

Scientific employments

1986-1989: Teaching contracts at the Institute of Fundamental and Applied Nuclear Physics, University of Kiel

1989: Scientific employee at the Institute of Fundamental and Applied Nuclear Physics, University of Kiel

1991-1996: Ph.D. student at the Department of Theoretical Oceanography, Institute of Marine Research, Kiel

1996-1997: Scientific employee at the Department of Theoretical Oceanography, Institute of Marine Research, Kiel

1997: Teaching contract, University of Kiel

1997-2006: Scientific employee at the Rossby Centre, SMHI, responsible for the development of a 3D coupled ice-ocean model for the Baltic Sea and for the Arctic Ocean, Nordic Seas, and North Atlantic Ocean

July 2006 - August 2015: Head of the Oceanographic Research Unit at the Research Department at SMHI (scientifically and economically responsible for 16-19 scientists)

August 2006 - July 2012: 20% teaching and supervising as adjoint lecturer (“adjungerad lektor i meteorologi och oceanografi”) with affiliation at the Department of Meteorology at Stockholm University (MISU)

August 2012 - September 2015: 20% teaching and supervising as adjunct professor in oceanography with affiliation at the Department of Meteorology at Stockholm University (MISU)

October 2015 – November 2022: 20% scientific employee at the Research Department, SMHI, project coordinator

since October 2015: Head of the Department of Physical Oceanography and Instrumentation at the Leibniz Institute for Baltic Sea Research Warnemünde, and professor at Rostock University (4 hours per week teaching obligations)

Training courses

Jun 2001: PRISM/COACH summer school on “Climate modelling in Europe” (Les Diablerets, Switzerland, one week)

May 2004: university teaching (“Högskolepedagogisk introduktionskurs”, Göteborg University, one week)

Nov 2006: project management and leadership course for members of steering groups (“Praktisk projektstyrning (PPS) Styrgrupp”, Tieto Enator, 1 day)

Jan/Feb 2007: leadership course (“Forma Ledarutveckling”, 4 days)

Feb 2010: media training course (“medie/budskapsträning”, 1 day)

Feb/May 2010: leadership course (“ledarutveckling, Ekebacka Konsult AB”, 4 days)

Invited visiting scientist

Aug 1997: Department of Meteorology, Stockholm University, Stockholm, Sweden

Feb 2003: International Arctic Research Center, University of Alaska, Fairbanks, U.S.A.

Nov 2005: Institute of Oceanology, University of Gdansk, Gdynia, Poland

Editorial tasks:

- 2009-2022: Topic Editor of the EGU journal Ocean Science (<http://www.oceanscience.net/index.html>)
- winter/spring 2012: Member of the Guest Editorial Board of the AMBIO special issue “ECOSUPPORT - Different Ecosystem Drivers Under Future Climate Scenarios in the Baltic Sea” (Volume 41, Number 6, September 2012)
- 2016-2017: Guest Editor of the Special Issue on the 10th Baltic Sea Science Congress in Estuarine, Coastal and Shelf Science, Volume 195, Pages 1-124 (5 August 2017): Understanding the Baltic Sea. Edited by **H.E. Markus Meier**, Laimdota Kalniņa and Anda Ikauniece.
- 2017: Guest Editor of the Special Issue on the 1st Baltic Earth Conference on “Multiple drivers for Earth system changes in the Baltic Sea region” in Nida, Curonian Spit, Lithuania, 13-17 June 2016, in Earth System Dynamics.
- 2018-2019: Guest Editor of the HyMeX Special Issue on “Hydrological cycle in the Mediterranean” in the EGU journals Atmospheric Chemistry and Physics, Hydrology and Earth System Sciences, Ocean Science, Natural Hazards and Earth System Sciences, Geoscientific Model Development, Atmospheric Measurements Techniques
- 2018-2019: Guest Editor of the Special Issue on the 2nd Baltic Earth Conference on “The Baltic Sea Region in Transition” in Helsingør, Denmark, 11-15 June 2018, in Frontiers in Earth Science
- 2019-2021: Lead Guest Editor of the Special Issue of the Baltic Earth Assessment Reports project in Earth System Dynamics

- 2019-2020: Guest Editor of the Special Issue “Understanding the Indian Ocean System: past, present and future” in Ocean Science
- 2021-2022: Guest Editor of Oceanologia for a thematic Baltic Earth issue “Marginal Seas”, <https://www.sciencedirect.com/journal/oceanologia/vol/65/issue/1>
- Since 2023: Guest Editor of Special Issue on the 4th Baltic Earth conference on “Assessing the Baltic Sea Earth System”, 30 May - 3 June 2022, Jastarnia, Hel Peninsula, Poland, in Oceanologia

Referee for research councils:

- Member of the Changing Arctic Ocean Moderating Panel, Natural Environment Research Council (NERC), Great Britain
- Natural Sciences and Engineering Research Council of Canada (NSERC)
- Helmholtz Association of National Research Centres, Germany
- Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS)
- Member of the evaluation panel of the Swedish Research Council (VR)
- Swedish Environmental Protection Agency (SEPA)
- The Netherlands Organisation for Scientific Research (NWO, the Dutch Research Council)
- Estonian Science Foundation
- Intergovernmental Panel on Climate Change (IPCC), fourth and fifth assessment reports (AR4, AR5)
- Canadian Foundation for Climate and Atmospheric Sciences (CFCAS)
- University of Alaska Coastal Marine Institute (CMI)
- National Council for Science, Higher Education and Technological Development in the Republic of Croatia
- Oceanic and Atmospheric Research (OAR) Awards Board, 2021 OAR Outstanding Scientific Paper Awards review
- German Research Foundation (DFG)
- German Ministry of Education and Research (BMBF)

Referee for international scientific journals:

- Science
- Nature communications
- Geophysical Research Letters
- Environmental Research Letters
- Environmental Research Communications
- Journal of Geophysical Research - Oceans

- Tellus
- Climate Dynamics
- Continental Shelf Research
- Monthly Weather Review
- International Journal of Climatology
- Ocean Sciences
- Journal of Climate
- Journal of Marine Research
- Journal of Marine Systems
- Boreal Environmental Research
- Ocean Dynamics
- Climate Research
- Journal of Sea Research
- AMBIO
- Nordic Hydrology
- Estuarine, coastal and shelf science
- Oceanologia
- Geophysica
- Marine Ecology Progress Series
- Global and Planetary Change
- International Review of Hydrobiology
- International Journal of Earth Sciences
- Environmental Modeling and Assessment
- Climate of the Past
- Ocean Engineering
- History of Oceanography Yearbook
- Great Lakes Research
- Climatic Change
- Eos (newsletter of the American Geophysical Union, AGU)
- Geoscientific Model Development
- Ocean Modelling
- Limnology and Oceanography
- Ecological Engineering
- Ecological Applications
- Journal of Environmental Management
- Progress in Oceanography

- Meteorologische Zeitschrift
- Climate report for the Hamburg region, Germany
- Biogeosciences
- Environmental Science and Technology
- Deep-Sea Research Part II
- Journal of Advances in Modelling Earth Systems
- Scientific Reports
- Marine Pollution Bulletin
- Pure and Applied Geophysics
- State of the Planet
- EGUsphere

Awards:

Oct 2011: the project ECOSUPPORT received the Bonus+ Award 2011 for the best public engagement activity or product for the GEODOME stakeholder decision support by scientific communication (2000 Euro)

Apr 2021: selected for the Reuters list of the world's top climate scientists identifying and ranking 1,000 climate academics (no. 934, 131 publications, 5,541 citations)

Nov 2023: Professor Kazimierz Demel Medal by the National Marine Fisheries Research Institute, Gdynia, Poland.

Grants (see detailed list below)

Additional assignments:

2000-2001: Member of the evaluation group for ocean modeling at SMHI (Bengtsson et al., 2001)

2001: Member of the second evaluation group for ocean modeling at SMHI

2002-2005: External expert and advisor of the EU funded Centre of Excellence for Baltic Development, Education and Research (BALTDER), Institute of Oceanology, University of Gdansk, Gdynia, Poland

2005: Member of the writing team of chapter 2 (Past and current climate change, detection and attribution) and chapter 3 (Projections of future climate change) of the BALTEX Assessment of Climate Change for the Baltic Sea Basin (BACC)

2006-2015: Member of the steering group of the Research Department at the Swedish Meteorological and Hydrological Institute

2007-2018: Chair of the BALTEX/Baltic Earth Working Group on the "Added Value of Regional Coupled Atmosphere-Ocean Models" (http://www.baltex-research.eu/organisation/bwg_rcm.html). The working group will conduct working group meetings, organizing workshops open for all interested scientist on the topic, and setting up international collaborations and projects financed by the EU, BONUS or national funding agencies.

2009-2011: Coordinator of the international BONUS+ project "ECOSUPPORT" with 11 involved partners, about 1.6 mio Euro, 2009-2011,

2011-2016: Lead author for the North Sea Region Climate Change Assessment (NOSCCA), chapter 3.2: Projected changes in the North Sea

2011-2014: Lead author for the Assessment of Climate Change in the Baltic Sea Region II (BACC II), chapter 13: Projected Change - Marine Physics

2011-2012: Member of the Working Group on Drafting a Science Plan for a scientific research network following BALTEX Phase II (PostBALTEX).

2012-2015: Member of the OSPAR Intersessional Correspondence Group on Eutrophication Modelling

2013: Member of the Swedish Research Council Review Panel (NT-8)

2013-2018: Chair of the Baltic Earth Working Group on Baltic Sea scenario simulations

2013-2014: Chair of the Interim Science Steering Group of the BALTEX successor program "Baltic Earth" (<http://www.baltex-research.eu/>)

since 2014: Chair of the Science Steering Group of "Baltic Earth" (<http://www.balticearth.eu/>)

2015-2016: Member of the writing team of the Baltic Earth science plan

since 2015: Member of the Faculty of Mathematics and Natural Sciences at Rostock University

2015: Member of the steering group of the coastal ocean modellers within the strategy group of coastal research of the Consortium of German Marine Research (Die nationale Arbeitsgruppe Küstenozeanmodellierung in der Strategieguppe Küstenforschung Konsortium Deutsche Meeresforschung)

since 2016: Member of the Interdisciplinary Faculty at Rostock University, Department of Maritime Systems

2016-2022: Board Member of the scientific committee of the HLRN (Wissenschaftlicher Ausschuss des Norddeutschen Verbundes für Hoch- und Höchstleistungsrechnen)

2016-2023: Representative of the Leibniz Institute for Baltic Sea Research Warnemünde within the German Climate Consortium (Deutsches Klima-Konsortium e.V., DKK)

2018-2022: Coordinator of the Baltic Earth Assessment Reports (BEAR) Project and Lead Author of the third Assessment of Climate Change for the Baltic Sea Region

since 2019: member of the European Geoscience Union (EGU)

since November 2018: Coordinator of the German monitoring program at the Leibniz Institute for Baltic Sea Research Warnemünde

since February 2019: Co-Chair of the HELCOM-Baltic Earth Expert Network on Climate Change (EN-CLIME) representing Baltic Earth, coordination of primary climate parameters

since November 2021: Co-Chair of the Scientific Council of the Leibniz Institute for Baltic Sea Research

April 2022 – October 2022: Member of the Task Group 1 of the JPI Oceans and JPI Climate Knowledge Hub on Sea Level Rise

Research Highlights

Our paper on “Hypoxia in future climates: A model ensemble study for the Baltic Sea.”, *Geophys. Res. Lett.*, 38, L24608, 2011, was highlighted by *Nature Climate Change*, see A. Brown, 2012: Low oxygen outlook. *Nature Climate Change*, 2, 75 (doi:10.1038/nclimate1406, published online 27 January 2012)

Our paper on “Modeling the combined impact of changing climate and changing nutrient loads on the Baltic Sea environment in an ensemble of transient simulations for 1961-2099.”, *Climate Dynamics*, 2012, doi: 10.1007/s00382-012-1339-y. (published online 25 April 2012) was highlighted by *Nature Climate Change*, see B. Wake, 2012: Climate and Baltic Sea nutrients, Vol. 2, p. 394 (doi:10.1038/nclimate1567, published online 25 May 2012)

Teaching

1986-1989: Exercises for undergraduate students at Kiel University (Theoretical Physics, 1170 working hours)

1997: Exercises for undergraduate students at Kiel University (Theoretical Oceanography, 48 lecture hours)

Jan 2005: Lectures for graduate students at Stockholm University (Physical oceanography of the Baltic Sea and seas around Sweden, 4 lecture hours)

Nov 2005: Invited guest lecture for graduate students at Gdansk University (Physical Oceanography of the Baltic Sea, 2 lecture hours)

Nov/Dec 2006: Lectures for undergraduate students at Stockholm University (Dynamical Meteorology I, 28 lecture hours corresponding to 120 working hours)

Dec 2008/Jan 2009: Lectures for graduate students at Stockholm University (Large scale oceanic circulation and physical oceanography of the Baltic Sea, 10 lecture hours corresponding to 40 working hours)

Nov/Dec 2008: Lectures for undergraduate students at Stockholm University (Dynamical Meteorology I, 30 lecture hours corresponding to 120 working hours)

Apr 2009: Invited guest lecture for graduate students at Lund University within the course “The Baltic Sea: Yesterday, Today and Tomorrow” (Physical processes and predicted changes with climate, 2 lecture hours)

Jul 2009: Invited lectures for graduate students at the International BALTEX summer school on “Threats and challenges for the Baltic Sea environment under climate change”, Nexø, Bornholm, Denmark, 27 July - 5 August, 2009 (Regional climate simulations and uncertainties of scenario simulation, 8 lecture hours)

Sep 2009: Invited guest lecture for undergraduate students at Södertörn University, Huddinge, Sweden, within the course “The Baltic Sea’s Ecosystem and Natural Resources” (in total 15 ECTS credits) (2 lecture hours)

Nov/Dec 2009: Lectures for undergraduate students at Stockholm University (Dynamical Meteorology I, 36 lecture hours corresponding to 144 working hours, 12 ECTS credits)

Oct 2010: Invited guest lecture for undergraduate students at Södertörn University, Huddinge, Sweden, “Impact of changing climate on the Baltic Sea” (2 lecture hours)

- Oct 2010: Lecture for graduate students within the “Climate Modelling School” organized by the BONUS+ project AMBER, Norrköping, Sweden, “Baltic Sea Climate Modelling” (1 lecture hour)
- Nov/Dec 2010: Lectures for undergraduate students at Stockholm University (Dynamical Meteorology I, 36 lecture hours corresponding to 144 working hours, 12 ECTS credits)
- Mar 2013: Invited lecture for graduate students at the Baltic Ecosystem Adaptive Management (BEAM) modeling course “Modeling as a tool to study the Baltic Sea ecosystem - Possibilities and challenges”, Askö Laboratory, Sweden, 18-24 March 2013, “Biogeochemical modeling in the Baltic Sea (RCO-SCOB, future climate projections)”
- May 2013: Keynote lecture at the Baltic Ecosystem Adaptive Management (BEAM) modeling seminar Stockholm University, Sweden, 18-24 March 2013, “Oceanography”
- June 2013: Lectures for undergraduate (master) students at Stockholm University (Physical Oceanography, my part comprises 4 lecture hours corresponding to 16 working hours, 7.5 ECTS credits in total)
- September 2014: Lecture for graduate students within the NorMER (The Nordic Centre for Research on Marine Ecosystems and Resources under Climate Change) Climate Change workshop on “Climate modelling: the global and regional perspective”, 29 September, Copenhagen, Denmark.
- December 2014 - January 2015: Lectures for undergraduate (master) students at Stockholm University (Physical Oceanography, my part comprises the course coordination and 4 lecture hours corresponding to 16 working hours, 7.5 ECTS credits in total)
- August 2015: International advanced PhD course on “Impact of climate change on the marine environment with special focus on the role of changing extremes, Askö Laboratory, Trosa, Sweden, 24 - 30 August 2015 (50 lecture hours, tutorials and exercises, 4 ECTS credits in total)
- August 2016: International master course on “Climate of the Baltic Sea Region”, Askö Laboratory, Trosa, Sweden, 29 August - 5 September 2016 (50 lecture hours, tutorials, and exercises, 3 ECTS credits in total)
- Winter term 2016/2017 (October 2016 - January 2017): International master course on “Climate of the Ocean”, Rostock University (lectures, tutorials and exercises, 3 ECTS credits in total, 2.5 lecture hours per week)
- April 2017: Teaching on the RADO workshop for science journalists (in German), Strahlsund, Germany (10 lecture hours in total)
- August 2017: International master course on “Climate of the Baltic Sea Region”, Askö Laboratory, Trosa, Sweden, 28 August - 4 September 2017 (50 lecture hours, tutorials, and exercises, 3 ECTS credits in total)
- Winter term 2017/2018 (October 2017 - January 2018): International master course on “Climate of the Ocean”, Rostock University (lectures, tutorials and exercises, 3 ECTS credits in total, 2.5 lecture hours per week)
- August 2018: International master course on “Climate of the Baltic Sea Region”, Askö Laboratory, Trosa, Sweden, 20-27 August 2018 (50 lecture hours, tutorials, and exercises, 3 ECTS credits in total)

September 2018: Summer school “Coastal dynamics - consequences for coastal protection and ecology”, 18 – 29 September 2018, Hiddensee Island, Germany (my part comprises 4 lecture hours), <https://deutsche-kuestenforschung.de/coastal-summer-school-2018.html>

Winter term 2018/2019 (October 2018 - January 2019): International master course on “Climate of the Ocean”, Rostock University (lectures, tutorials and exercises, 3 ECTS credits in total, 2.5 lecture hours per week)

March 2019: International master course on “Analysis of Climate Variability”, Leibniz Institute of Baltic Sea Research Warnemünde, 22-29 March 2019 (50 lecture hours, tutorials, and exercises, 3 ECTS credits in total)

August 2019: International master course on “Climate of the Baltic Sea Region”, Askö Laboratory, Trosa, Sweden, 26 August -2 September 2019 (50 lecture hours, tutorials, and exercises, 3 ECTS credits in total)

Winter term 2019/2020 (October 2019 - January 2020): International master course on “Climate of the Ocean”, Rostock University (lectures, tutorials and exercises, 3 ECTS credits in total, 2.5 lecture hours per week)

March 2020: International master course on “Analysis of Climate Variability”, cancelled due to COVID-19

August 2020: International master course on “Climate of the Baltic Sea Region”, online course, 26 August -2 September 2020 (50 lecture hours, tutorials, and exercises, 3 ECTS credits in total)

Winter term 2020/2021 (November 2020 - February 2021): International master course on “Climate of the Ocean”, Rostock University (lectures, tutorials and exercises, 3 ECTS credits in total, 2.5 lecture hours per week)

March 2021: 2nd International Master Course on “Analysis of Climate Variability” (lectures, tutorials, and exercises corresponding to 3 ECTS), online course, 17 - 26 March 2021.

August 2021: 7th International Master Course on “Climate of the Baltic Sea Region” (lectures, tutorials, and exercises corresponding to 3 ECTS), Askö Laboratory, Trosa, Sweden, 23-30 August 2021.

Winter term 2021/2022 (October 2021 - January 2022): International master course on “Climate of the Ocean”, Rostock University (lectures, tutorials and exercises, 3 ECTS credits in total, 2.5 lecture hours per week)

March 2022: 3rd International Master Course on “Analysis of Climate Variability” (lectures, tutorials, and exercises corresponding to 3 ECTS), online course, 15 - 23 March 2022.

June 2022: Summer Research Academy for Students (Rays), lecture on “What does a climate scientist do?”, online, 28 June 2022

August 2022: 8th International Master Course on “Climate of the Baltic Sea Region” (lectures, tutorials, and exercises corresponding to 3 ECTS), Askö Laboratory, Trosa, Sweden, 22-29 August 2022.

Winter term 2022/2023 (October 2022 - January 2023): International master course on “Climate of the Earth System”, Rostock University (lectures, exercises, project work, 6 ECTS credits in total, 4 lecture hours per week, hybrid format)

March 2023: 4th International Baltic Earth Winter School for Young Scientists on “Earth System Science for the Baltic Sea Region”, 27 - 31 March 2023, Leibniz Institute for Baltic Sea Research Warnemünde, Rostock, Germany

May 2023: Lecture within the sustainMare program (“Ringvorlesung”) about future climate change in the North Sea and Baltic Sea regions („Zukünftige Klimaänderungen in Nord- und Ostsee”, in German), 10 May 2023

Aug 2023: Organizer of the 9th International Master Course on “Climate of the Baltic Sea Region” (lectures, tutorials, and exercises corresponding to 3 ECTS), Askö Laboratory, Trosa, Sweden, 21-28 August 2023

Winter term 2023/2024 (October 2023 - January 2024): International master course on “Climate of the Earth System”, Rostock University (lectures, exercises, project work, 6 ECTS credits in total, 4 lecture hours per week, hybrid format)

Supervising

Guest scientists at SMHI supervised:

- Dr. Frank Kauker (AWI, Bremerhaven, 2001, 2002)
- Dr. Jari Haapala (FIMR, Helsinki, 2003)
- PhD student Robert Osinski (IOPAS, Sopot, 2005)
- Dr. Jan Jedrasik (Gdansk University, Gdynia, 2005)
- PhD student Germo Väli (Marine Systems Institute at Tallinn University of Technology, Tallinn, 2011)
- PhD student Maciej Janecki (IOPAS, Sopot, 2014)

Guest scientists at IOW supervised:

- Dr. Germo Väli (Marine Systems Institute at Tallinn University of Technology, MSI, Tallinn, 2015, 2016, 2017, 2018, October to December 2019, April 2022, November/December 2022)
- Christian Dieterich (Swedish Meteorological and Hydrological Institute, SMHI, Norrköping, February to March 2020)

Honours/master thesis students supervised:

- Ulf Ekström (Linköping University, 2002): Setup of the Rossby Centre Ocean model applied to the Arctic Ocean. (practical course as part of the master degree, 4 months)
- Tobias Strömberg (Royal Institute of Technology (KTH), Stockholm, 2005): Implementation of a flux corrected transport scheme in the Rossby Centre Ocean model. (20 point honours research project, master degree)
- Mattias Franzén (Göteborg University, 2007): Analysis of sea level trends in the North Sea and Kattegat area simulated with the CCSM3 global climate model during 1870-2100. (10 point honours research project, bachelor degree)
- David Olofsson (Department of Meteorology, Stockholm University, 2007): Developing analysis tools to investigate results of the Rossby Centre Ocean model. (student summer employment, 2 months)

- Johannes Behling (upper-secondary school pupil from Kiel, Germany, 2008): Introduction into ocean modelling. (practical course, 2 weeks)
- Malin Anteros (Department of Meteorology, Stockholm University, 2008): Analysing the Baltic Sea conveyor belt using results of a three-dimensional ocean circulation model. (20 point honours research project, master degree)
- David Lindstedt (Department of Meteorology, Stockholm University, 2008): Impact of mixing on the Baltic Sea deep water renewal - a model study. (20 point honours research project, master degree)
- Elin Jansson (Department of Meteorology, Stockholm University, 2009): Impact of river regulation on the Baltic Sea salinity. (30 point honours research project, master degree)
- Céline Gieße (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, 2017/2018): Numerical Sensitivity Study on Haline Convection due to Sea Ice Brine Rejection in the Northern Baltic Sea. (one year honours research project, master degree)
- Maja Illig (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, Aug-Sep 2019): Analysis of historical sea level records (Master student in physics from University Dresden, practical course (Hilfswissenschaftlerin), 2 months)
- Annika Jaitner (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, Aug 2020): Hypoxia in coastal seas, Bachelor of Science in mathematical biometry, University Ulm, practical course (Hilfswissenschaftlerin), 1 month)
- Karina Krapf (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, July 2020 - June 2021): Spatio-temporal patterns of hypoxia in the Baltic Sea (half year honours research project, master degree, University Bayreuth)
- Kseniia Safonova (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, November 2020 - June 2021): Analysis of historical sea level records and projections (scientific assistant/Hilfswissenschaftlerin), 8 months)
- Pauline Schäfer (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, October 2021 - December 2021): Analysis of marine heat waves (internship and scientific assistant/Hilfswissenschaftlerin), 3 months)
- Laura Detjen (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, January 2022 - February 2022): Analysis of hypoxia in the coastal zone of the Baltic Sea (internship), 3 weeks)
- Marti Wolff (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, April – June 2023): Analysis of Baltic Sea climate variability based on model data for the last 8000 years (three-month honours research project, bachelor degree, University of Rostock)
- Julia Noack (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, June 2023): marine heat waves (internship), 3 weeks)

- Annina Reining (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, June 2023): internship, 1 weeks
- Michelle Reiff (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, September/October 2023): global sea surface temperature trends, internship, 3 weeks
- Kseniia Safonova (Department of Physical Oceanography and Instrumentation, Leibniz Institute for Baltic Sea Research Warnemünde, 1 July 2022 – 31 December 2023): Marine heat waves and impact on the marine ecosystem (scientific employee)

PhD thesis students supervised:

- Hannes Rennau (Baltic Sea Research Institute Warnemünde at the University of Rostock, since 2011): Natural, numerical and structure-induced mixing in dense gravity currents: idealized and realistic model studies (PhD committee member, main supervisor: Prof. Hans Burchard)
- Lisa Bengtsson (Department of Meteorology, Stockholm University, 2006-2012): Cloud parameterizations in general circulation models. (PhD committee member, main supervisor: Prof. Erland Källén)
- Sebastian Mårtensson (Department of Meteorology, Stockholm University, 2007-2013): Modeling climate variability of the Arctic Ocean in past and future climates with special focus on changing sea-ice. (Primary supervisor)
- Christian Porsche (Baltic Sea Research Institute Warnemünde at the University of Rostock, since 2009): Einfluss von Klimaveränderung auf das Ökosystem der Ostsee - Vergleich von Variationen in den letzten 2000 Jahren mit erwarteten Veränderungen in den nächsten 100 Jahren (Co-supervisor, main supervisor: Dr. Thomas Neumann)
- Léon Chafik (Department of Meteorology, Stockholm University, 2009-2014): (PhD committee member, main supervisor: Prof. Peter Lundberg)
- Per Pemberton (Department of Meteorology, Stockholm University, 2010-2014): Freshwater processes and water mass transformation in the Arctic Ocean. (Primary supervisor)
- Ulrika Willén (Department of Meteorology, Stockholm University, since 2010): (PhD committee member, main supervisor: Prof. Mikael Tjernström)
- Filippa Fransner (Department of Meteorology, Stockholm University, since September 2012): On the fate of terrestrial dissolved organic carbon in the ocean. PhD within the Baltic Ecosystem Adaptive Management (BEAM) program. (Primary supervisor until August 2015)
- Madline Kniebusch (Leibniz Institute of Baltic Sea Research Warnemünde, May 2016 – July 2019, magna cum laude): Detection and attribution studies of climate related changes in the Baltic Sea since 1850 (Primary supervisor)
- Florian Börgel (Leibniz Institute of Baltic Sea Research Warnemünde, September 2017 – October 2020, summa cum laude): Low-frequency variability in the Baltic Sea region (Primary supervisor)
- Jan Moritz Kaiser (Leibniz Institute of Baltic Sea Research Warnemünde, June 2019 – May 2022, abandoned): Reconstruction of paleo-climate variability in the Baltic Sea (Primary supervisor)

- Lev Naumov (Leibniz Institute of Baltic Sea Research Warnemuende, September 2020 – February 2024): Dynamics of oxygen in coastal seas - the Baltic Sea example (Primary supervisor)
- Leonie Barghorn (Leibniz Institute of Baltic Sea Research Warnemuende, since January 2022): Multidecadal variability in the water exchange between North Sea and Baltic Sea (Primary supervisor)

University / Research Institute committees:

- Opponent at licentiat thesis presentation at Uppsala University (Björn Carlsson, 2007).
- Committee member of licentiat thesis defense at Stockholm University (Linus Magnusson, 2007).
- Committee member of PhD thesis defense at Göteborg University (Christian Nohr, May 2009).
- Member of the evaluation committee of 6 master thesis defenses at Stockholm University (Emma Grönkvist, Per Axelsson, Marcus Johansson, Anders Söderberg, Alexander Håkansson, Charlotte Boström, June 2009).
- Board member of the 'ECOCHANGE' programme, the joint Strategic Marine Environmental Research Programme on the Baltic Sea of Umeå and Linnaeus universities (2010-2017)
- Member of the Scientific Advisory Board of the Leibniz Institute for Baltic Research Warnemünde, Rostock, Germany. (2012-2015)
- Committee member of the PhD thesis defense at Stockholm University (Marie-Luise Kapsch, October 2015).
- Referee and committee member of the PhD thesis defense at Johann Wolfgang Goethe-University in Frankfurt am Main, Germany (Trang Van Pham, The consideration of North and Baltic Seas in regional climate modeling with the coupled atmosphere-ocean-ice model COSMO-CLM/NEMO, 22 May 2019)
- Referee (pre-examination) and opponent of the PhD thesis at Aalto University School of Engineering, Finland (Dr. Petra Roiha, Advancements of the operational oceanography in the Baltic Sea, 20 December 2019)
- Referee and committee member of the habilitation thesis defense at the University of Toulouse III by Dr. Angélique Melet (14 November 2022)

Coordination of International Workshops or Sessions at International Meetings, Scientific Organizing Committees, Summer schools

- Feb 1998: Coordinator of the SWECLIM workshop on atmosphere and ocean circulation climate modeling, Norrköping, Sweden
- Nov 1998: Coordinator of the SWECLIM workshop on modeling sea ice coupled to a 3D Baltic Sea model, Norrköping, Sweden
- Oct 1999: Co-coordinator of the SWECLIM workshop on coupling of ocean, ice, and atmosphere, Norrköping, Sweden
- Aug 2003: Co-convener of the Baltic Sea Ice Research workshop at the Baltic Sea Science Conference (BSSC), Helsinki, Finland
- Oct 2003: Member of the scientific organizing committee of the Second Workshop on Climate Variations in Sweden during the past 2000 years: Climate variability, environmental change, and cultural response, Uppsala, Sweden
- Jun 2005: Convener of the workshop on “Ventilation of the Baltic Sea deep water: observations and model results” at the Baltic Sea Science Conference (BSSC), Sopot, Poland
- Nov 2005: Coordinator of the Fourth Workshop on Climate Variations in Sweden during the past 2000 years: Observations and model results, Norrköping, Sweden
- Mar 2007: Convener of the session “Dynamics of the Baltic Sea deep water - observations and model results” at the Baltic Sea Science Conference (BSSC), Rostock, Germany
- Jan 2008: Organizer of the BALTEX workshop on the “Utility of Regional Climate Models”, Norrköping, Sweden, 23 January 2008
- Oct 2008: Organizer of the Marine Environmental Day “Can we save the Baltic Sea? Eutrophication in future climate”, Norrköping, Sweden, 21 October 2008
- May 2009: Member of the scientific committee of the second Lund Regional-scale Climate Modelling Workshop: “21st Century Challenges in Regional Climate Modelling”, Lund, Sweden, May 4-8, 2009
- May 2009: Member of the scientific committee of the conference “Climate change - The environmental and socioeconomic response in the southern Baltic region”, and convener of Session B: “Modeling of the past climate change and future projections”, Szczecin, Poland, 25-29 May, 2009
- Jul 2009: Co-Convener (IAPSO) and session chair of the session J 21 “Regional Climate Modelling” at the Joint Assembly of IAMAS (International Association of Meteorology and Atmospheric Science), IAPSO (International Association for the Physical Sciences of the Oceans) and IACS (International Association of the Cryospheric Sciences), MOCA-09, in Montreal, Canada, July 20-24, 2009.
- Aug 2009: Member of the scientific committee of the 7th Baltic Sea Science Congress (BSSC) 2009 “Towards better understanding and improved technology for serving the society” Tallinn, Estonia, 17-21 August, 2009

- Oct 2009: Organizer of the international Workshop “The marine ecosystem in changing climate - on the added value of coupled climate-environmental modeling for the Baltic Sea”, Norrköping, Sweden, 16 October 2009.
- Oct 2010: Organizer of the “Climate Modelling School for PhD students, Norrköping, Sweden, 13 October 2010.
- Oct 2010: Organizer of the international BONUS+ program workshop “Uncertainties of scenario simulations”, Norrköping, Sweden, 14 October 2010.
- Aug 2011: Member of the scientific committee of the 8th Baltic Sea Science Congress (BSSC) 2011 “Joint research efforts for sustainable ecosystem management” St. Petersburg, Russia, 22-26 August, 2011
- Aug 2011: Convener of the theme session “Impact of changing climate and human-induced pressures on the Baltic Sea Ecosystem” proposed by the BONUS+ program by Markus Meier (Sweden), Joachim Dippner (Germany), Aarno Kotilainen (Finland) at the Baltic Sea Science Congress (BSSC), St.Petersburg, Russia, 22-26 August 2011
- Sep 2011: Co-Convener of the theme session “Integration of multidisciplinary knowledge in the Baltic Sea to support science-based management” proposed by the BONUS+ program by Sakari Kuikka (Finland), Michael Gilek (Sweden), Markus Meier (Sweden), Kari Lehtonen (Finland) at the 2011 Annual Science Conference of International Council for the Exploration of the Sea (ICES), Gdansk, Poland, 19-23 September 2011
- Dec 2011: Organizer of the international ECOSUPPORT and RECOCA stakeholder conference on “An outlook to the future Baltic Sea: how can we reach the targets of the Baltic Sea Action Plan?”, Stockholm University, Stockholm, Sweden, 7 December 2011.
- Jul 2013: Lead convener for the symposium on “Baltic and other regional seas” (P02) at the Joint Assembly of IAHS (International Association of Hydrological Science), IAPSO (International Association for the Physical Sciences of the Oceans) and IASPEI (International Association of Seismology and Physics of the Earth’s Interior), in Gothenburg, Sweden, July 22-26, 2013.
- Aug 2013: Member of the international scientific committee of the 9th Baltic Sea Science Congress (BSSC) 2013 “New horizons for Baltic Sea Science”, and convener of the Session (no. 9): “Climate of Baltic Sea in 21st century, effects from micro-scales to regional patterns”, Klaipeda, Lithuania, 26-30 August, 2013
- May 2014: Member of the scientific committee of the international conference on “Climate Change - The environmental and socio-economic response in the southern Baltic region”, Szczecin, Poland, 25-28 May, 2014
- May 2014: Member of the scientific committee of the 6th IEEE/OES Baltic Symposium 2014 on “Measuring and modeling of multi-scale interactions in the marine environment”, Tallinn, Estonia, 26-29 May, 2014
- Dec 2014: Co-convener of the session on “Prospects of the New Science and Outreach Network Baltic Earth with Results of the Second Climate Change Assessment for the Baltic Sea Region (BACC II)” at the AGU fall meeting, San Francisco, 15-19 December 2014
- Feb 2015: Member of the review panel “Sea-based measures to reduce consequences of eutrophication organized by Stockholm University, the Swedish Ministry of Environment and the Swedish Agency for Marine and Freshwater Management, 12 February 2015, Stockholm University

- Jun 2015: Member of the international scientific committee of the 10th Baltic Sea Science Congress (BSSC) 2015 “Science and innovation for future of the Baltic and the European regional seas”, Riga, Latvia, 15-19 June, 2015
- Aug 2015: Organizer of the International advanced PhD course on “Impact of climate change on the marine environment with special focus on the role of changing extremes (corresponding to 4 ECTS), co-organized by the “Baltic Ecosystem Adaptive Management (BEAM) and Baltic Earth programmes and funded by BEAM, Askö Laboratory, Trosa, Sweden, 24 - 30 August 2015
- Nov 2015: Member of the scientific committee of the joint HyMeX-Baltic Earth Workshop on “Joint regional climate system modelling for the European sea regions”, Rome, 5-6 November, 2015
- Apr 2016: Co-convener of the session on “Climate change and its impacts in the Baltic and North Sea regions: Observations and model projections (CL4.04)” at the EGU 2016 in Vienna, 17-22 April 2016
- May 2016: Co-convener of the side event on the use of coupled regional climate models in CORDEX (FPS) at the ICRC-CORDEX conference, 19th May 2016, co-organization: S. Somot (Meteo-France/CNRM), M. Meier (IOW, SMHI)
- Jun 2016: Chair of the organization committee of the 1st Baltic Earth conference on “Multiple drivers for Earth system changes in the Baltic Sea region”, Nida, Curonian Spit, Lithuania, 13-17 June 2016
- Aug 2016: Organizer of the 2nd International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Rostock University, Leibniz Institute for Baltic Sea Research Warnemünde, Stockholm University, SMHI and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 29 August - 5 September 2016
- Nov 2016: Organizer of the international Baltic Earth workshop on “Scenario simulations for the Baltic Sea 1960-2100, Leibniz Institute for Baltic Sea Research Warnemünde, Rostock, Germany, 22-24 November 2016
- Feb 2017: Organizer of the international Baltic Earth workshop on “Coupled atmosphere-ocean modeling for the Baltic Sea and North Sea, Leibniz Institute for Baltic Sea Research Warnemünde, Rostock, Germany, 7-8 February 2017
- Mar 2017: Organizer of the international Baltic Earth seminar on “Saltwater inflows into the Baltic Sea, Leibniz Institute for Baltic Sea Research Warnemünde, Rostock, Germany, 9 March 2017
- Apr 2017: Co-convener of the session on “Climate change and its impacts in the Baltic and North Sea regions: Observations and model projections (CL4.04)” at the EGU 2017 in Vienna, 23-28 April 2017, Convener: Marcus Reckermann, Co-convener: Corinna Schrum, Markus Quante, Markus Meier
- Jun 2017: Member of the international scientific committee of the 11th Baltic Sea Science Congress (BSSC) 2017 “Living along gradients: past, present, future”, Rostock, Germany, 12-16 June, 2017
- Aug 2017: Organizer of the 3rd International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under

the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 28 August - 4 September 2017

Mar 2018: Member of the scientific committee of the joint MedCORDEX - Baltic Earth – COST Workshop on “Regional Climate System Modelling for the European Sea Regions”, Universitat de les Illes Balears, Palma de Mallorca, Spain, 14-16 March, 2018

Jun 2018: Chair of the scientific conference committee and member of the organization committee of the 2nd Baltic Earth conference on “The Baltic Sea Region in Transition”, Helsingør, Denmark, 11-15 June 2018

Aug 2018: Organizer of the 4th International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 20 – 27 August 2018

Nov 2018: Member of the scientific committee of the Baltic Earth Workshop on “Multiple drivers for Earth system changes in the Baltic Sea region”, Tallinn University of Technology, Tallinn, Estonia, 26- 27 November 2018

Mar 2019: Organizer of the 1st International Master Course on “Analysis of Climate Variability” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, Leibniz Institute for Baltic Sea Research Warnemünde, Germany, 22 - 29 March 2019

Aug 2019: Organizer of the 5th International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 26 August – 2 September 2019

Nov 2019: Member of the scientific committee of the Baltic Earth Workshop on Climate projections and uncertainties in the northern Baltic Sea region, Finnish Environment Institute, Helsinki, Finland, 19- 20 November 2019

Mar 2020: Organizer of the 2nd International Master Course on “Analysis of Climate Variability” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, Leibniz Institute for Baltic Sea Research Warnemünde, Germany, planned for 23 - 30 March 2020, but cancelled due to COVID-19

Jun 2020: Chair of the scientific conference committee and member of the organization committee of the 3rd Baltic Earth conference on “Earth system changes and Baltic Sea coasts”, 2-3 June 2020, video conference

Aug 2020: Organizer of the 6th International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, online course, 24 - 31 August 2020

Mar 2021: Organizer of the 2nd International Master Course on “Analysis of Climate Variability” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, online course, 17 - 26 March 2021.

- Aug 2021: Organizer of the 7th International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Hereon under the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 23-30 August 2021.
- Nov 2021: Member of the scientific committee of the Marginal Seas conference "Eurasian Marginal Seas - Past and Future", organized by Guangzhou Marine Geological Survey (GMGS), China Geological Survey, China, online conference, 16-19 November 2021.
- Mar 2022: Organizer of the 3rd International Master Course on “Analysis of Climate Variability” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, online course, 15 - 23 March 2022.
- May 2022: Organizer of the international JPI Oceans and JPI Climate Knowledge Hub Sea Level Rise Baltic Sea Workshop, 9 - 10 May 2022, online
- Jun 2022: Chair of the scientific conference committee and member of the organization committee of the 4th Baltic Earth conference on “Assessing the Baltic Sea Earth System”, 30 May - 3 June 2022, Jastarnia, Hel Peninsula, Poland
- Aug 2022: Organizer of the 8th International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Hereon under the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 22-29 August 2022
- Oct 2022 – Jan 2023: International master course on “Climate of the Earth system” (corresponding to 6 ECTS), every Wednesday 13:00-17:00 CET, hybrid lectures Rostock and online, exercises and project work, co-organized by the University of Rostock and the Leibniz Institute for Baltic Sea Research Warnemünde (IOW) under the umbrella of Baltic Earth (baltic.earth)
- Mar 2023: Organizer of the International Baltic Earth Winter School for Young Scientists on “Earth System Science for the Baltic Sea Region”, co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Geesthacht under the umbrella of the Baltic Earth program, Warnemünde, 27 - 31 March 2023
- Aug 2023: Organizer of the 9th International Master Course on “Climate of the Baltic Sea Region” (corresponding to 3 ECTS), co-organized by Leibniz Institute for Baltic Sea Research Warnemünde, Rostock University and Helmholtz Zentrum Hereon under the umbrella of the Baltic Earth program, Askö Laboratory, Trosa, Sweden, 21-28 August 2023
- Sep 2023: Convener of the session D1 „CORDEX-Ocean: Towards a CORDEX framework for Ocean Regional Climate Modelling” at the ICRC-CORDEX conference, Trieste, Italy, 23-29 September 2023.
- Oct 2023 – Jan 2024: International master course on “Climate of the Earth system” (corresponding to 6 ECTS), every Wednesday 13:00-17:00 CET, hybrid lectures Rostock

and online, exercises and project work, co-organized by the University of Rostock and the Leibniz Institute for Baltic Sea Research Warnemünde (IOW) under the umbrella of Baltic Earth (baltic.earth)

Nov 2023: Member of the scientific committee of the international conference " Marine Geology: Marginal Seas – Past and Future", organized by Guangzhou Marine Geological Survey (GMGS), China Geological Survey, Guangzhou, P.R. China, hybrid conference, 27 November - 1 December 2023.

Apr 2024: Co-convenor of the session on "Human and other drivers of change: Impacts and interlinkages in marginal seas and their coastal regions (ITS5.12/CL0.1.11)" at the EGU 2024 in Vienna, 14–19 April 2024

May 2024: Chair of the scientific conference committee and member of the organization committee of the 5th Baltic Earth conference on "New Challenges for Baltic Sea Earth System Research", 13 - 17 May 2024, Jurmala, Latvia.

Publications

Diploma Thesis

Meier, H.E.M., 1989: Nonlineare, plane plasma waves in Pulsar magnetospheres – an approach to take radiation reaction into account (in German). Diploma thesis, University of Kiel, 125 pp.

Ph.D. Thesis

Meier, H.E.M., 1996: A regional model of the western Baltic Sea with open boundary conditions and data assimilation (in German). PhD thesis, University of Kiel, in: Ber. Inst. f. Meereskunde No.284, D-24105 Kiel, Germany, 117 pp.

Articles in international scientific journals with referee practice

Summary: More than 142 peer-reviewed, accepted manuscripts (assessed on 2023-12-17; Web of Science: 137 published articles, 6304 times cited, h-index 41; Scholar Google: 10478 times cited, h-index 54; 2 articles highlighted by Nature Climate Change), 2 Eos articles, 25 scientific reports, 9 book chapters, 93 other scientific publications (newsletter articles, conference proceedings, editorials, etc.)

1. Haapala, J., **H.E.M. Meier**, and J. Rinne, 2001: Numerical investigations of future ice conditions in the Baltic Sea. *Ambio*, 30, 237-244.
2. **Meier, H.E.M.**, 2001: On the parameterization of mixing in three-dimensional Baltic Sea models. *J. Geophys. Res.*, 106, 30,997 - 31,016.
3. Döscher, R., U. Willén, C. Jones, A. Rutgersson, **H.E.M. Meier**, U. Hansson, and L.P. Graham, 2002: The development of the regional coupled ocean-atmosphere model RCAO. *Boreal Env. Res.*, 7, 183-192.
4. **Meier, H.E.M.**, 2002: Regional ocean climate simulations with a 3D ice-ocean model for the Baltic Sea. Part 1: Model experiments and results for temperature and salinity. *Clim. Dyn.*, 19, 237-253.
5. **Meier, H.E.M.**, 2002: Regional ocean climate simulations with a 3D ice-ocean model for the Baltic Sea. Part 2: Results for sea ice. *Clim. Dyn.*, 19, 255-266.

6. **Meier, H.E.M.**, and R. Döscher, 2002: Simulated water and heat cycles of the Baltic Sea using a 3D coupled atmosphere-ice-ocean model. *Boreal Env. Res.*, 7, 327-334
7. **Meier, H.E.M.**, and T. Faxén, 2002: Performance analysis of a multiprocessor coupled ice-ocean model for the Baltic Sea. *J. Atmos. Oceanic Technol.*, 19, 114-124.
8. Kauker, F., and **H.E.M. Meier**, 2003: Modeling decadal variability of the Baltic Sea: 1. Reconstructing atmospheric surface data for the period 1902-1998. *J. Geophys. Res.*, 108(C8), 3267, doi:10.1029/2003JC001797.
9. **Meier, H.E.M.**, and F. Kauker, 2003: Modeling decadal variability of the Baltic Sea: 2. Role of freshwater inflow and large-scale atmospheric circulation for salinity. *J. Geophys. Res.*, 108(C11), 3368, doi:10.1029/2003JC001799.
10. **Meier, H.E.M.**, and F. Kauker, 2003: Sensitivity of the Baltic Sea salinity to the freshwater supply. *Clim. Res.*, 24, 231-242.
11. **Meier, H.E.M.**, R. Döscher, and T. Faxén, 2003: A multiprocessor coupled ice-ocean model for the Baltic Sea: Application to salt inflow. *J. Geophys. Res.*, 108(C8), 3273, doi:10.1029/2000JC000521.
12. Wang, J., R. Kwok, F.J. Saucier, J. Hutchings, M. Ikeda, W. Hibler III, J. Haapala, M.D. Coon, **H.E.M. Meier**, H. Eicken, N. Tanaka, D. Prentki, and W. Johnson, 2003: Working towards improved small-scale sea ice-ocean modeling in the Arctic seas. *EOS, Trans. AGU*, 84(34), 325, 329-330.
13. Räisänen, J., U. Hansson, A. Ullerstig, R. Döscher, L.P. Graham, C. Jones, **H.E.M. Meier**, P. Samuelsson, and U. Willén, 2004: European climate in the late twenty-first century: regional simulations with two driving global models and two forcing scenarios. *Clim. Dyn.*, 22, 13-31.
14. Döös, K., **H.E.M. Meier**, and R. Döscher, 2004: The Baltic haline conveyor belt or the overturning circulation and mixing in the Baltic. *Ambio*, 33, 261-266.
15. Döscher, R., and **H.E.M. Meier**, 2004: Simulated sea surface temperature and heat fluxes in different climates of the Baltic Sea. *Ambio*, 33, 242-248.
16. **Meier, H.E.M.**, R. Döscher, and A. Halkka, 2004: Simulated distributions of Baltic seaice in warming climate and consequences for the winter habitat of the Baltic ringed seal. *Ambio*, 33, 249-256.
17. **Meier, H.E.M.**, B. Broman, and E. Kjellström, 2004: Simulated sea level in past and future climates of the Baltic Sea. *Clim. Res.*, 27, 59-75.
18. **Meier, H.E.M.**, R. Döscher, B. Broman, and J. Piechura, 2004: The major Baltic inflow in January 2003 and preconditioning by smaller inflows in summer/autumn 2002: a model study. *Oceanologia*, 46, 557-579.
19. **Meier, H.E.M.**, 2005: Modeling the age of Baltic Sea water masses: Quantification and steady state sensitivity experiments. *J. Geophys. Res.*, 110, C02006, doi:10.1029/2004JC002607.
20. Kjellström, E., R. Döscher, and **Meier, H.E.M.**, 2005: Atmospheric response to different sea surface temperatures in the Baltic Sea: Coupled versus uncoupled regional climate model experiments. *Nordic Hydrology*, 36 (4-5), 397-409.
21. **Meier, H.E.M.**, B. Broman, H. Kallio, and E. Kjellström, 2006: Projections of future surface winds, sea levels, and wind waves in the late 21st century and their

- application for impact studies of flood prone areas in the Baltic Sea region. In: Schmidt-Thomé, P. (ed.), *Sea level changes affecting the spatial development of the Baltic Sea region, Geological Survey of Finland, Special Paper 41*, Espoo, 23-43, <http://arkisto.gtk.fi/sp/SP41.pdf>.
22. **Meier, H.E.M.**, 2006: Baltic Sea climate in the late twenty-first century: a dynamical downscaling approach using two global models and two emission scenarios. *Clim. Dyn.*, 27(1), 39-68, doi: 10.1007 / s00382-006-0124-x.
 23. **Meier, H.E.M.**, R. Feistel, J. Piechura, L. Arneborg, H. Burchard, V. Fiekas, N. Golenko, N. Kuzmina, V. Mohrholz, C. Nohr, V.T. Paka, J. Sellschopp, A. Stips, and V. Zhurbas, 2006: Ventilation of the Baltic Sea deep water: A brief review of present knowledge from observations and models. *Oceanologia*, 48(S), 133-164.
 24. **Meier, H.E.M.**, E. Kjellström, and L. P. Graham, 2006: Estimating uncertainties of projected Baltic Sea salinity in the late 21st century. *Geophys. Res. Lett.*, Vol. 33, No. 15, L15705, doi: 10.1029/2006GL026488.
 25. **Meier, H.E.M.**, 2007: Modeling the pathways and ages of inflowing salt- and freshwater in the Baltic Sea. *Estuarine, Coastal and Shelf Science*, Vol. 74/4, 717-734. <https://doi.org/10.1016/j.ecss.2007.05.019>
 26. Burchard, H., P. D. Craig, J. R. Gemmrich, H. van Haren, P.-P. Mathieu, **H. E. M. Meier**, W. A. M. N. Smith, H. Prandke, T. P. Rippeth, E. D. Skillingstad, W. D. Smyth, D. J. S. Welsh, and H. W. Wijesekera, 2008: Observational and numerical modeling methods for quantifying coastal ocean turbulence and mixing. *Prog. Oceanog.*, 76, 399-442.
 27. Eilola, K., **H.E.M. Meier**, and E. Almroth, 2009: On the dynamics of oxygen, phosphorus and cyanobacteria in the Baltic Sea; a model study. *J. Marine Systems*, 75, 163-184.
 28. Conley, D. J., S. Björk, E. Bonsdorff, J. Carstensen, G. Destouni, B. G. Gustafsson, S. Hietanen, M. Kortekaas, H. Kuosa, **H. E. M. Meier**, B. Müller-Karulis, K. Nordberg, G. Nürnberg, A. Norkko, H. Pitkänen, N. Rabalais, R. Rosenberg, O. Savchuk, C. P. Slomp, M. Voss, F. Wulff, and L. Zillén, 2009: Hypoxia-Related Processes in the Baltic Sea. *Environmental Science and Technology*, 43(10), 3412-3420.
 29. Döscher, R., K. Wyser, **H. E. M. Meier**, M. Qian, and R. Redler, 2010: Quantifying Arctic contributions to climate predictability in a regional coupled ocean-ice-atmosphere model. *Clim. Dyn.*, 34, 1157-1176, doi: 10.1007/s00382-009-0567-y (published online 8 Apr 2009)
 30. Hordoir, R., and **H. E. M. Meier**, 2010: Freshwater fluxes in the Baltic Sea: A model study. *J. Geophys. Res.*, 115, C08028, doi: 10.1029/2009JC005604.
 31. **Meier, H.E.M.**, K. Eilola, and E. Almroth, 2011: Climate-related changes in marine ecosystems simulated with a three-dimensional coupled biogeochemical-physical model of the Baltic Sea. *Clim. Res.*, 48, 31-55.
 32. Soomere, T., N. Delpeche, B. Viikmäe, E. Quak, **H. E. M. Meier**, and K. Döös, 2011: Patterns of current-induced transport in the surface layer of the Gulf of Finland. *Boreal Env. Res.*, 16 (suppl. A), 49-63
 33. **Meier, H.E.M.**, A. Höglund, R. Döscher, H. Andersson, U. Löptien and E. Kjellström, 2011: Quality assessment of atmospheric surface fields over the Baltic Sea of an ensemble of regional climate model simulations with respect to ocean dynamics. *Oceanologia*, 53, 193-227.

34. Hordoir, R., and **H. E. M. Meier**, 2012: Effect of climate change on the thermal stratification of the Baltic Sea - a sensitivity experiment. *Clim. Dyn.*, 38:1703-1713, doi: 10.1007/s00382-011-1036-y. (published on-line 4 March 2011)
35. Almroth-Rosell, E., K. Eilola, R. Hordoir, **H. E. M. Meier**, and P. O. J. Hall, 2011: Transport of fresh and resuspended particulate organic material in the Baltic Sea - a model study. *J. Marine Systems*, 87, 1-12, doi:10.1016/j.jmarsys.2011.02.005
36. Eilola, K., B.G. Gustafson, I. Kuznetsov, **H.E.M. Meier**, T. Neumann, O. P. Savchuk, 2011: Evaluation of biogeochemical cycles in an ensemble of three state-of-the-art numerical models of the Baltic Sea during 1970-2005. *J. Marine Systems*, 88, 267-284, doi:10.1016/j.jmarsys.2011.05.004
37. Löptien, U., and **H. E. M. Meier**, 2011: The influence of increasing water turbidity on the sea surface temperature in the Baltic Sea: A model sensitivity study. *J. Marine Systems*, 88, 323-331, doi:10.1016/j.jmarsys.2011.06.001
38. Reckermann, M., J. Langner, A. Omstedt, H. von Storch, S. Keevallik, B. Schneider, B. Arheimer, **H. E. M. Meier** and B. Hünicke, 2011: BALTEX - An interdisciplinary research network for the Baltic Sea region. *Environ. Res. Lett.*, 6, 045205
39. **Meier, H.E.M.**, H.C. Andersson, K. Eilola, B.G. Gustafsson, I. Kuznetsov, B. Müller-Karulis, T. Neumann, O. P. Savchuk, 2011: Hypoxia in future climates: A model ensemble study for the Baltic Sea. *Geophys. Res. Lett.*, 38, L24608 (highlighted by Nature Climate Change, A. Brown, 2012: Low oxygen outlook, Vol. 2, p. 75, 2012, doi:10.1038/nclimate1406, published online 27 January 2012)
40. **Meier, H.E.M.**, R. Hordoir, H.C. Andersson, C. Dieterich, K. Eilola, B.G. Gustafsson, A. Höglund, and S. Schimanke, 2012: Modeling the combined impact of changing climate and changing nutrient loads on the Baltic Sea environment in an ensemble of transient simulations for 1961-2099. *Clim. Dyn.*, 39, 2421-2441, doi: 10.1007/s00382-012-1339-y. (published on-line 25 April 2012) (highlighted by Nature Climate Change, B. Wake, 2012: Climate and Baltic Sea nutrients, Vol. 2, p. 394, doi:10.1038/nclimate1567, published online 25 May 2012)
41. **Meier, H. E. M.**, B. Müller-Karulis, H. C. Andersson, C. Dieterich, K. Eilola, B. G. Gustafsson, A. Höglund, R. Hordoir, I. Kuznetsov, T. Neumann, Z. Ranjbar, O. P. Savchuk, and S. Schimanke, 2012: Impact of climate change on ecological quality indicators and biogeochemical fluxes in the Baltic Sea - a multi-model ensemble study. *AMBIO*, 41 (6), 558-573, doi:10.1007/s13280-012-0317-y, <http://www.springerlink.com/content/n5158p42n133/>
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- European Geophysical Society 27th General Assembly, Nice, France, April 21-25, 2002, Author(s): **H.E.M. Meier** and F. Kauker, Title: Modeling decadal variability of the Baltic Sea during 1902-1998 (Poster).
- Fourth Workshop on Baltic Sea Ice Climate, Norrköping, Sweden, May 22-24, 2002 Author(s): **H.E.M. Meier** and R. D'oscher, Title: On the sensitivity of Baltic Sea ice variability to changing climate.
- International Workshop on Small-Scale Sea Ice-Ocean Modeling (SIOM) for Nearshore Beaufort and Chukchi Seas, Fairbanks, Alaska, August 7-9, 2002, Author(s): **H.E.M. Meier**, Title: On the sensitivity of Baltic Sea ice variability to changing climate (invited).
- Kick-off meeting of SEAREG (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), Helsinki, Finland, September 15-17, 2002, Author(s): **H.E.M. Meier**, Title: Introduction of the SWECLIM project.
- Baltic Sea Ice Workshop, Celebrating the 100th anniversary of the Tvärminne Zoological Station, September 18-21, 2002, Author(s): **H.E.M. Meier**, Title: Baltic sea ice in changing climate simulated with the Rossby Centre coupled ice-ocean model.
- SWECLIM-MARE workshop on Processes of importance for the large-scale salinity distribution of a semi-enclosed sea such as the Baltic, Kristineberg, Sweden, November 4-6, 2002, Author(s): **H.E.M. Meier** and F. Kauker, Title: Modeling decadal variability of the Baltic Sea during 1902-1998.
- SWECLIM-MARE workshop on Processes of importance for the large-scale salinity distribution of a semi-enclosed sea such as the Baltic, Kristineberg, Sweden, November 4-6, 2002, Author(s): **H.E.M. Meier**, Title: Modeling the vertical circulation of the Baltic Sea deepwater using a 3D ocean model.
- First Workshop on Climate Variations in Sweden During the Past 2000 Years, Stockholm University, Stockholm, November 7-8, 2002, Author(s): **H.E.M. Meier** and F. Kauker, Title: Modeling climate variability of the Baltic Sea.
- BALTEX Workshop on Achievements of and Perspectives for the BALTEX Programme, Lund University, Lund, Sweden, November 18, 2002, Author(s): **H.E.M. Meier** and R. D'oscher, Title: Modeling the climate, environment and processes of the Baltic Sea: Examples and ideas based on the regional model system at the Rossby Centre (invited).

Lectures 2003

- Seminar at the International Arctic Research Center (IARC), Frontier Research System for Global Change, University of Alaska, Fairbanks, U.S.A., February 19, 2003,

- Author(s): **H.E.M. Meier**, Title: Regional climate modeling at the Rossby Centre (invited).
- Seminar on Measures against Coastal Erosion, Helsingborg, Sweden, March 27, 2003, Author(s): **H.E.M. Meier**, Title: Climate change - projections of Baltic sea level variability in 100 years (invited).
 - EGS - AGU - EUG Joint Assembly, Nice, France, April 6-11, 2003, Author(s): **H.E.M. Meier**, Title: On the sensitivity of the Baltic Sea salinity to the freshwater supply.
 - First Annual SEAREG Workshop (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), University of Greifswald, Greifswald, Germany, April 23-25, 2003, Author(s): **H.E.M. Meier**, Title: Modeling of climate change and possibilities of application.
 - First Annual SEAREG Workshop (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), University of Greifswald, Greifswald, Germany, April 23-25, 2003, Author(s): **H.E.M. Meier** and B. Broman, Title: Climate and sea level change modeling: Further work.
 - SWECLIM (Swedish Regional Climate Modelling Programme) Final Scientific Conference, Söderköping, Sweden, June 11-12, 2003, Author(s): **H.E.M. Meier** and R. Döscher, Title: Ocean Climate Research at the Rossby Centre during SWECLIM.
 - 4th Baltic Sea Science Congress, Helsinki University, Helsinki, Finland, August 24-28, 2003, Author(s): **H.E.M. Meier**, Title: Modelling the changing climate of the Baltic Sea during the 20th and 21st century (plenary session).
 - Second Workshop on Climate Variations in Sweden during the past 2000 years: Climate variability, environmental change, and cultural response, Uppsala, Sweden, October 20-21, 2003, Author(s): **H.E.M. Meier**, Title: The Baltic Sea as integrating climate indicator.

Lectures 2004

- WCRP-sponsored Regional-scale Climate Modelling Workshop on “High-resolution climate modeling: Assessment, added value and applications”, Lund, Sweden, March 29 April 2, 2004, Author(s): **H.E.M. Meier**, Title: Regional ocean modeling (invited), <http://www.natgeo.lu.se/Lars.barring/RCMworkshop/RCMhome.htm>
- Second Annual SEAREG Workshop (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), Stockholm, Sweden, April 22-24, 2004, Author(s): **H.E.M. Meier**, Title: Simulated sea level in past and future climate of the Baltic Sea.
<http://www.gsf.fi/projects/seareg/2ndworkshop.html>
- Second Annual SEAREG Workshop (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), Stockholm, Sweden, April 22-24, 2004, Author(s): **H.E.M. Meier**, Title: Foreseen SMHI contribution to Knowledge Base and other DSF parts.
<http://www.gsf.fi/projects/seareg/2ndworkshop.html>
- Fourth study conference on BALTEX, Gudhjem, Bornholm, Denmark, 24-28 May, 2004, Author(s): **H.E.M. Meier** and F. Kauker, Title: What causes stagnation of the Baltic Sea deepwater?

- Fourth study conference on BALTEX, Gudhjem, Bornholm, Denmark, 24-28 May, 2004, Author(s): **H.E.M. Meier**, B. Broman, and E. Kjellström, Title: Modelling sea level variability in different climates of the Baltic Sea (Poster).
- Workshop on “Sea waves and current modeling in marine ecology with emphasis given to data assimilation” organized by BALTDER (Centre of Excellence for Baltic Development, Education and Research), Marine Station on Hel, Institute of Oceanology, University of Gdansk, Poland, 22-24 August, 2004, Author(s): **H.E.M. Meier**, Title: Variational data assimilation using the adjoint method: an application for the Baltic Sea (invited).
- Presentation at the Institute of Oceanology, Polish Academy of Sciences, Sopot, Poland, 25 August, 2004, Author(s): **H.E.M. Meier**, Title: Modeling climate variability of the Baltic Sea - new results based upon the regional model system at the Rossby Centre (invited).
- Bjerknes Centenary 2004, Open Science Conference “Climate Change in High Latitudes”, Bergen, Norway, September 1-3, 2004, Author(s): **H.E.M. Meier** and R. D’oscher, Title: Sea-ice climate of the Baltic in the late 21st century - a dynamical downscaling approach using results of two global models and two forcing scenarios (Poster).
- Rossby Centre Climate Modelling Day, Norrköping, Sweden, October 6, 2004, Author(s): **H.E.M. Meier**, Title: What information do we get from the RCO model?

Lectures 2005

- Third Annual SEAREG Workshop (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), Tallin, Estonia, March 3-5, 2005, Author(s): **H.E.M. Meier**, B. Broman, H. Kallio, and E. Kjellström. Title: Projections of future surface winds and sea levels in the late 21st century and their application for impact studies of flood prone areas in the Baltic Sea Region. <http://www.gsf.fi/projects/seareg/2ndworkshop.html>
- 9th Workshop of the Arctic Ocean Model Intercomparison Project (AOMIP), McGill University, Montreal, Canada, June 15-16, 2005, Author(s): **H.E.M. Meier**, R. D’oscher, K. Wyser, and K. Döös, Title: The Rossby Centre Ocean model applied to the Arctic Ocean using ERA-40.
- 5th Baltic Sea Science Congress (“The Baltic Sea - a changing ecosystem”), Sopot, Poland, June 20-23, 2005, Author(s): **H.E.M. Meier**, Title: Modelling the age of Baltic Sea water masses: inter-annual variability, steady-state sensitivity experiments, and scenarios (plenary session).
- Workshop on “Ventilation of the Baltic Sea deepwater: observations and model results” at the 5th Baltic Sea Science Congress (“The Baltic Sea - a changing ecosystem”), Sopot, Poland, June 20-23, 2005, Author(s): **H.E.M. Meier**, R. D’oscher, B. Broman, and J. Piechura, Title: The major Baltic inflow in January 2003 and preconditioning by smaller inflows in summer/autumn 2002: a model study.
- 5th Baltic Sea Science Congress (“The Baltic Sea - a changing ecosystem”), Sopot, Poland, June 20-23, 2005, Author(s): R. D’oscher, and **H.E.M. Meier**, Title: Simulated Sea Surface Temperature and Sea Ice in different Climates of the Baltic (Poster).
- Rossby Centre Day 2005, Norrköping, Sweden, October 6, 2005, Author(s): **H.E.M. Meier**, Title: Stakeholder support. Experiences and tools from the SEAREG project.

- Presentation at the Baltic Sea Research Institute Warnemünde, Germany, 25 October, 2005, Author(s): **H.E.M. Meier**, Title: Klimaveränderungen der Ostsee im 20. und 21. Jahrhundert - neue Ergebnisse basierend auf dem regionalen Modellsystem des Rossby Centers (invited).
- Fourth Workshop on Climate Variations in Sweden during the past 2000 years: Observed and simulated climate variability. Norrköping, Sweden, November 3-4, 2005, Author(s): **H.E.M. Meier**, Title: Observed and simulated salinity variations in the Baltic Sea.
- Presentation at the Institute of Oceanology, University of Gdansk, Gdynia, Poland, 7 November, 2005, Author(s): **H.E.M. Meier**, Title: Past and future climate change of the Baltic Sea (invited).
- Presentation at the Institute of Oceanology, University of Gdansk, Gdynia, Poland, 9 November, 2005, Author(s): **H.E.M. Meier**, Title: Modelling the vertical circulation of the Baltic Sea deep water (invited).

Lectures 2006

- UK/Sweden science seminar “Predicting climate change in the Arctic”, Stockholm, Sweden, 8-9 March, 2006, Author(s): **H.E.M. Meier**, Title: The Rossby Centre Ocean model applied to the Baltic Sea and Arctic Ocean (invited).
- International “Workshop on Polar and Global Climate Modeling: Connection and Interplay”, International Arctic Research Center, University of Alaska Fairbanks, Alaska, USA, 14-16 June, 2006, Author(s): **H.E.M. Meier**, Title: Sensitivity of Arctic sea ice in coupled and uncoupled regional climate model simulations (invited).

Lectures 2007

- 6th Baltic Sea Science Congress, Rostock, Germany, 19-23 March, 2007, Author(s): **H.E.M. Meier**, Title: On the Baltic conveyor belt.
- Baltic Sea 2020 Workshop: Understanding hypoxia in the Baltic Sea, Lund University, Lund, Sweden, 17-19 April, 2007, Author(s): **H.E.M. Meier**, Title: Modelling hypoxia in the Baltic Sea during the 20th and 21st centuries (invited short presentation).
- HELCOM-EuroGOOS workshop: Operational models in the service of the Baltic Sea Action Plan, Helsinki, Finland, 22 May, 2007, Author(s): **H.E.M. Meier**, Title: Longterm scenario simulations of the Baltic Sea ecosystem to support decision making.
- Workshop on added values of regional climate models and detection and attribution studies in the Baltic Basin, Göteborg University, Göteborg, Sweden, 24-25 May, 2007, Author(s): **H.E.M. Meier**, Title: How RCO can be used in Baltic Sea attribution studies.
- Fifth study conference on BALTEX, Kuressaare, Saaremaa, Estonia, 4-8 June 2007, Author(s): **H.E.M. Meier**, Title: Modeling the pathways and ages of inflowing salt- and freshwater in the Baltic Sea.
- Fifth study conference on BALTEX, Kuressaare, Saaremaa, Estonia, 4-8 June 2007, Author(s): **H.E.M. Meier** and K. Eilola. Title: Impact of climate change on the Baltic Sea ecosystem.
- AOMIP/(C)ARCMIP/SEARCH for DAMOCLES workshop, University Pierre et Marie Curie, Paris, France, 29-31 October 2007, Author(s): **H.E.M. Meier** and Per

Pemberton. Titel: On the parameterization of mixing in regional circulation models for the Arctic Ocean.

- Presentation at Uppsala University, Sweden, 5 October, 2007, Author(s): **H.E.M. Meier**, Title: Baltic Sea modeling activities at the Swedish Meteorological and Hydrological Institute 1997-2007 - a review (invited).
- Swedish Marine Science Conference 2007, Tjärno marine biological laboratory, Strömstad, Sweden, 7-9 November 2007, Author(s): **H.E.M. Meier**, Kari Eilola, and Elin Almroth, Title: Uncertainties of future projections of the Baltic ecosystem.
- Baltic Sea 2020 Workshop: Understanding hypoxia in the Baltic Sea, Lund University, Lund, Sweden, 27-29 November, 2007, Author(s): **H.E.M. Meier**, Kari Eilola, and Lars Axell, Title: Simulations of some engineering methods proposed to improve conditions in the Baltic proper using RCO-SCOBI (invited presentation).

Lectures 2008

- BALTEX workshop on the Utility of Regional Climate Models, Swedish Meteorological and Hydrological Institute, Norrköping, Sweden, 23 January, 2008, Author(s): **H.E.M. Meier**, Title: Scenarios of the Baltic Sea ecosystem calculated with a regional climate model.
- HELCOM EUTRO PRO 6-2008 meeting, Copenhagen, Denmark, 4-5 February, 2008, Author(s): Kari Eilola and **H.E.M. Meier**, Title: Modelling of Baltic Sea reference conditions for WFD implementation.
- ECOOP Annual Meeting, Hellenic Centre for Marine Research, Glyfada (Athens), Greece, 13-14 February, 2008, Author(s): **H.E.M. Meier**, Kari Eilola, and Elin Almroth, Title: Climate-related changes in marine ecosystems simulated with a three-dimensional coupled biogeochemical-physical model of the Baltic Sea (invited presentation).
- Presentation at the Centre for Marine and Atmospheric Sciences (ZMAW), Geophysical Colloquium, Hamburg, Germany, 17 April, 2008, Author(s): **H.E.M. Meier**, Title: Changing climate of the Baltic Sea during the 20th and 21st century - latest results based upon coupled physical-biogeochemical model simulations (invited presentation).
- US/EU-Baltic 2008 International Symposium: Ocean Observations, Ecosystem-Based Management and Forecasting, Tallinn, Estonia, 27-29 May, 2008, Author(s): **H.E.M. Meier**, Title: Impact of climate change on physical and biogeochemical variables of the Baltic Sea. (invited presentation).
- US/EU-Baltic 2008 International Symposium: Ocean Observations, Ecosystem-Based Management and Forecasting, Tallinn, Estonia, 27-29 May, 2008, Author(s): **H.E.M. Meier** and K. Eilola, Title: SMHI ecosystem hindcasting the last 30 years - a basis for reference conditions within the Marine Directive.
- Rossby Centre Day 2008: "Nordic-Arctic Climate Change : Towards an Earth System Approach" Norrköping, Sweden, October 13-14, 2008, Author(s): **H.E.M. Meier**, Title: Coupled Climate and Environmental Modeling for the Baltic Sea Region. (invited presentation)
- Marine Environmental Day 2008: "Can we save the Baltic Sea? - Eutrophication in future climate", Norrköping, Sweden, October 21, 2008, Author(s): **H.E.M. Meier**, Title: Will the Baltic Sea Action Plan work in future climate?

- TELLUS-BALTEX Workshop on “Biogeochemical Land and Baltic Sea Interactions driven by Climate and Land Use”, University of Gothenburg, Sweden, 1-2 December 2008, Author: **H.E.M. Meier**, Title: Regional climate models and the coupling with marine biogeochemical models. (invited presentation)
- Application presentation at the Centre for Marine and Atmospheric Sciences (ZMAW), Hamburg, Germany, 22 December, 2008, Author(s): **H.E.M. Meier**, Title: Ursachen der dekadischen Variabilität der vertikalen Zirkulation in der Ostsee. (invited presentation)

Lectures 2009

- 2nd Lund Regional-scale Climate Modelling Workshop: “21st Century Challenges in Regional-scale Climate Modelling”, Lund, Sweden, 4 - 8 May 2009, Author(s): **H.E.M. Meier**, for the ECOSUPPORT consortium Title: Future challenges for regional coupled climate and environmental modeling in the Baltic Sea Region.
- 2nd Lund Regional-scale Climate Modelling Workshop: “21st Century Challenges in Regional-scale Climate Modelling”, Lund, Sweden, 4 - 8 May 2009, Author(s): **H.E.M. Meier**, L. Bärring, O. Bøssing Christensen, E. Kjellström, P. Lorenz, B. Rockel, and E. Zorita. Title: Selected examples of the added value of regional climate models (Poster).
- Joint Assembly of IAMAS (International Association of Meteorology and Atmospheric Science), IAPSO (International Association for the Physical Sciences of the Oceans) and IACS (International Association of the Cryospheric Sciences), Montreal, Canada, July 2024, 2009, Author(s): **H.E.M. Meier**, Title: Regional coupled climate and environmental modeling for the Baltic Sea Region.
- 7th Baltic Sea Science Congress, Tallinn, Estonia, 17-21 August, 2009, Author(s): **H.E.M. Meier**, for the ECOSUPPORT consortium Title: ECOSUPPORT - Advanced modeling tool for scenarios of the Baltic Sea ecosystem to support decision making.
- 7th Baltic Sea Science Congress, Tallinn, Estonia, 17-21 August, 2009, Author(s): **H.E.M. Meier**, K. Eilola, and E. Almroth Title: Climate-related changes in marine ecosystems simulated with a three-dimensional coupled biogeochemical-physical model of the Baltic Sea
- International conference on “Linking Science and Management in the Baltic Sea Ecoregion”, Copenhagen, Denmark, 9-10 September, 2009, Author(s): **H.E.M. Meier** Title: New modeling tools for scenarios of the Baltic Sea ecosystem to support decision making
- International Workshop on “The marine ecosystem in changing climate - on the added value of coupled climate-environmental modeling for the Baltic Sea”, Norrköping, Sweden, 16 October, 2009, Author(s): **H.E.M. Meier**, Title: Impact of changing climate on biogeochemical cycles in the Baltic Sea - an introduction.
- 13th Workshop of the Arctic Ocean Model Intercomparison Project (AOMIP), Woods Hole Oceanographic Institute, Woods Hole, MA, USA, October 20-23, 2009, Author(s): **H.E.M. Meier**, Sebastian Mårtensson, and Per Pemberton, Title: Impact of sea ice dynamics on the Arctic climate variability - a model study.

Lectures 2010

- BONUS annual conference 2010, Vilnius, Lithuania, 19-21 January, 2010, Author(s): **H.E.M. Meier** and ECOSUPPORT co-workers, Title: First results of recently performed scenario simulations for the Baltic Sea for 1961-2099.
- International workshop on “Effects of climate change on the marine environment” organized by the Nordic Council of Ministers, Copenhagen, Denmark, 9-10 March, 2010. Author(s): **H.E.M. Meier** Title: Impact of changing hydrography on biogeochemical cycles in future climates of the Baltic Sea. (invited presentation)
- Deutsche Meteorologische Gesellschaft, Deutscher Wetterdienst, Seewetteramt Hamburg, Hamburg, 16 March, 2010. Author(s): **H.E.M. Meier**, Title: Klimaszenarien für das 21. Jahrhundert - neue Ergebnisse basierend auf einem regionalen gekoppelten Atmosphäre-Eis-Ozeanmodell für die Ostsee. (invited presentation)
- Presentation at Finland’s environmental administration (SYKE), 24 May 2010, Helsinki, Finland, Author(s): **H.E.M. Meier**, Title: From daily algae forecasts towards scenario simulations of changing climate - an overview on environmental modelling activities at the Swedish Meteorological and Hydrological Institute. (invited presentation)
- Sixth study conference on BALTEX, Miedzyzdroje, Island of Wolin, Poland, 14 - 18 June 2010, Author(s): **H.E.M. Meier** and ECOSUPPORT collaborators. Title: Transient scenario simulations for the Baltic Sea for 1961-2099. (solicited)
- Sixth study conference on BALTEX, Miedzyzdroje, Island of Wolin, Poland, 14 - 18 June 2010, Author(s): K. Eilola, B.G. Gustafsson, R. Hordoir, A. Höglund, I. Kuznetsov, **H.E.M. Meier**, T. Neumann and O.P. Savchuk. Title: Quality assessment of state-of-the-art coupled physical-biogeochemical models for the Baltic Sea.
- EUTRO 2010, Nyborg, Denmark, 14 - 18 June 2010, Author(s): **H.E.M. Meier**, H. Andersson, K. Eilola, R. Hordoir, and A. Höglund, Title: New scenario simulations of the Baltic Sea ecosystem to support decision making.
- BalticStern workshop on scenarios, Stockholm Resilience Centre, Stockholm, Sweden, 6-7 October 2010, Author(s): **H.E.M. Meier**, Title: “Coupled climate-environmental modelling for the Baltic Sea Region” (invited presentation)
- BONUS+ program cluster workshop on “Uncertainties of scenario simulations”, Norrköping, Sweden, 14 October 2010. Author(s): **H.E.M. Meier**, A. Höglund, R. D’oscher, H. Andersson, U. Löptien and E. Kjellström, Title: “Quality assessment of atmospheric surface fields over the Baltic Sea of an ensemble of regional climate model simulations with respect to ocean dynamics”

Lectures 2011

- Presentation at the Swedish Ministry of Environment within a seminar on climate change impact studies, Stockholm, 29 March, 2011: Author(s): **H.E.M. Meier**, Title: Klimat och Ostersjöns havsmiljö (Climate and the Baltic Sea environment).”
- Presentation at the Centre of Water and Environmental Studies, Linköping University, Sweden, 30 March, 2011, Author(s): **H.E.M. Meier**, Title: Coupled climate and marine environmental modelling (invited presentation).
- Kungliga Skogs- och Lantbruksakademiens (KSLAs) Vattenkommitté (The Royal Swedish Academy of Agriculture and Forestry’s water committee), Seminarium om

Baltic Sea Action Plan - De svåra frågorna om eutrofieringen. Author(s): **H.E.M. Meier**, Title: Behövs fler modeller av Osternsjöns eutrofiering? (Are several models of the Baltic Sea eutrophication needed?) (invited presentation).

- EFARO (the European Fisheries and Aquaculture Research Organisation) General Assembly, Sopot, Poland, 24 May 2011, Author(s): **H.E.M. Meier**, Title: ECOSUPPORT management support for a changing Baltic Sea. (invited presentation)
- 8th Baltic Sea Science Congress, St. Petersburg, Russia, August 22-26, 2011, Author(s): **H.E.M. Meier**, H. Andersson, C. Dieterich, K. Eilola, B. Gustafsson, A. Höglund, R. Hordoir, I. Kuznetsov, T. Neumann, O. Savchuk and S. Schimanke, Title: Nutrient load reductions in future climate of the Baltic Sea - assessment of uncertainties.
- 8th Baltic Sea Science Congress, St. Petersburg, Russia, August 22-26, 2011, Author(s): **H.E.M. Meier**, Title: Assessment of Climate Change for the Baltic Sea - an update.
- 8th Baltic Sea Science Congress, St. Petersburg, Russia, August 22-26, 2011, Author(s): R. Hordoir and **H.E.M. Meier**, Title: Effect of climate change on the thermal stratification of the Baltic Sea: a sensitivity experiment.
- 8th Baltic Sea Science Congress, St. Petersburg, Russia, August 22-26, 2011, Author(s): R. Hordoir and **H.E.M. Meier**, Title: Freshwater fluxes in the Baltic Sea: A model study.
- ICES Annual Science Conference, Gdansk, Poland, 19 - 23 September 2011, Author(s): **H.E.M. Meier**, H. Andersson, C. Dieterich, K. Eilola, B. Gustafsson, A. Höglund, R. Hordoir, I. Kuznetsov, T. Neumann, O. Savchuk and S. Schimanke, Title: Projected Baltic Sea ecosystem changes in future climates.
- BALTEX Workshop on "Different concepts in biogeochemical modelling of the Baltic Sea", Baltic Sea Research Institute Warnemünde, Germany, 29 September 2011, Author(s): **H.E.M. Meier**, Title: Advantages and disadvantages of biogeochemical models used within ECOSUPPORT (invited).
- BONUS Forum at the 2nd Annual Forum for the EU Strategy for the Baltic Sea Region and the Baltic Development Forum, Gdansk, Poland, 24 October 2011, Author(s): **H.E.M. Meier**, Title: Advanced modeling tool for scenarios of the Baltic Sea ECOSystem to SUPPORT decision making (ECOSUPPORT).
- International ECOSUPPORT and RECOCA stakeholder conference on "An outlook to the future Baltic Sea: how can we reach the targets of the Baltic Sea Action Plan?", Stockholm University, Stockholm, Sweden, 7 December 2011, Author(s): **H.E.M. Meier**, Title: Introduction of ECOSUPPORT.

Lectures 2012

- European Climate Research Alliance (ECRA) pilot workshop: "Regional sea level change", Utrecht, The Netherlands, 13-14 March, 2012: Author(s): **H.E.M. Meier**, Title: Projections of future storm surges in the Baltic Sea.
- Second Joint International Symposium on "Effects of Climate Change on the World's Oceans" of ICES, PICES and IOS (convened as one of the official events related to Expo2012), Yeosu, Korea, May 15-19, 2012: Author(s): **H.E.M. Meier**, Title: Hypoxia in future climates - a model ensemble study for the Baltic Sea (invited).
- Hypoxia workshop at Utrecht University, The Netherlands, 13 November, 2012: Author(s): **H.E.M. Meier**, Title: Ensemble modeling for assessing the status of the Baltic Sea under future climate scenarios and management options (invited).

Lectures 2013

- Application presentation at the Baltic Sea Research Institute Warnemünde, Germany, 11 January 2013, Author(s): **H.E.M. Meier**, Title: Estimating uncertainties in future projections of Baltic Sea hypoxia (invited).
- HELCOM Workshop on “Baltic Sea region climate change and its implications”, 5-6 February 2013, Warnemünde, Germany: Author(s): **H.E.M. Meier**, Title: HELCOM Baltic Sea Action Plan in a warmer world (invited).
- ECOCHANGE seminar on “The cycling and fate of contaminants in the Baltic Sea in a Climate Change Perspective”, Ume, Sweden, 29 April, 2013, Author(s): **H.E.M. Meier**, Title: Climate change scenarios for the Baltic Sea and its drainage area (invited).
- BEAM seminar on “Modeling climate variability of the Baltic Sea and relevant processes”, Stockholm, Sweden, 22 May, 2013, Author(s): **H.E.M. Meier**, Title: (invited).
- Presentation at the DTU Aqua, National Institute of Aquatic Resources, Technical University of Denmark, Charlottenlund, Denmark, 4 June, 2013, Author(s): **H.E.M. Meier**, Title: Impact of changing climate on the marine ecosystem - a numerical modeling approach. (invited presentation)
- Seventh study conference on BALTEX, Borgholm, Island of Oland, Sweden, 10-14 June” 2013, Author(s): **H.E.M. Meier** and the ECOSUPPORT co-workers, Title: Advanced modeling tool for scenarios of the Baltic Sea ECOSystem to SUPPORT decision making (ECOSUPPORT, 2009-2011).
- Seventh study conference on BALTEX, Borgholm, Island of Oland, Sweden, 10-14 June” 2013, Author(s): **H.E.M. Meier** (chair of the new programme), Title: A new science and outreach programme for the Baltic Sea region.
- Joint Assembly of IAHS (International Association of Hydrological Sciences), IAPSO (International Association for the Physical Sciences of the Oceans) and IASPEI (International Association of Seismology and Physics of the Earth’s Interior) on ‘Knowledge for the future’, Gothenburg, Sweden, 22-26 July, 2013, Author(s): **H.E.M. Meier** and the ECOSUPPORT co-workers, Title: Comparing reconstructed past variations and future projections of the Baltic Sea ecosystem - results from multi-model ensemble simulations.
- Gulf of Finland Year 2014 data/modelling fusion workshop, Finnish Meteorological Institute, Helsinki, Finland, 19 September 2013, Author(s): **H.E.M. Meier**, Title: Long-term changes in Baltic Sea ecosystems under climate and nutrient load changes. (invited presentation)
- ICES Annual Science Conference, Reykjavik, Iceland, 23 - 27 September 2013, Author(s): **H.E.M. Meier** and the ECOSUPPORT co-workers, Title: Comparing reconstructed past variations and future projections of the Baltic Sea ecosystem.
- Conference of the Swedish Institute for the Marine Environment on “Climate change and its impact on the sea - and what are we doing?” (“Klimatförändringar och dess påverkan på havet - och vad gör vi?”), Marstrand, Sweden, 16-17 October 2013, Author(s): **H.E.M. Meier**, Title: Hur kommer klimatet att påverka Osternsjöns framtid? (How will climate change impact the future Baltic Sea?)
- Colloquium, Mesoskalige Meteorologie und Klima Institut für Atmosphäre und Umwelt/ Geozentrum, Riedberg Goethe-Universität Frankfurt a.M., 24 October 2013,

Author(s): **H.E.M. Meier**, Title: On the added value of regional climate system models. (invited presentation)

- Colloquium, Institute for Coastal Research, Helmholtz-Zentrum Geesthacht (HZG), Geesthacht, Germany, 7 November 2013, Author(s): **H.E.M. Meier**, Title: From daily forecasts to regional climate system modelling - an overview on ocean modelling activities at the Swedish Meteorological and Hydrological Institute. (invited presentation)
- Baltic Earth workshop on “Challenges for biogeochemistry research in the Baltic Sea Region”, Institute of Oceanology, Polish Academy of Sciences (IOPAN), Sopot, Poland, 13 November 2013, Author(s): **H.E.M. Meier**, Title: Challenges for biogeochemical modeling on centennial time scales. (invited presentation)
- Bolin Days, Bolin Centre for Climate Research, Stockholm University, Stockholm, Sweden, 21 November 2013, Author(s): **H.E.M. Meier**, Title: Modelling the impact of changing climate on biogeochemical cycles in the Baltic Sea and Laptev Sea/Arctic Ocean.

Lectures 2014

- International Conference organized by the European Cooperation in Science and Technology (COST) on “Predictive Power of Marine Science in a Changing Climate, Sopot, Poland, 7-8 April 2014, Author(s): **H. E. M. Meier**, Title: Uncertainties in state-of-the-art climate change projections of the Baltic Sea ecosystem (invited keynote speaker of the conference)
- 3rd Lund Regional-scale Climate Modelling Workshop: “21st Century Challenges in Regional Climate Modelling”, Lund, Sweden, 16-19 June 2014, Author(s): **H. E. M. Meier** and members of the Baltic Earth Working Group on Regional Climate System Modeling, Title: Challenges in regional climate system modeling for the Baltic Sea and North Sea regions. (invited keynote speaker of Theme 1 “Regional Climate and Earth System Models”)
- Sommerakademi (Expedition Akademi) 2014: Globalisierung und Meer - Die Ostsee zwischen Rekordverschmutzung, Wirtschaftswachstum und Interessenkonflikten, Mariehamn, Åland/Finland, 18-23 August 2014, Author(s): **H. E. M. Meier**, Title: Die Zukunft der Todeszonen in den tiefen Becken der Ostsee und mögliche Gegenmaßnahmen. (In German,
- The future of hypoxia in the deep basins of the Baltic Sea and possible countermeasures) (invited keynote speaker)
- The 12th Colloquium on Baltic Sea Marine Geology, Warnemünde, Germany, 8-12 September 2014, Author(s): **H. E. M. Meier**, Title: Reconstruction of Baltic Sea climate variations during the last millennium using numerical modeling (invited keynote speaker)
- Application presentation at the Helmholtz Zentrum Geesthacht, Germany, 19 November 2014, Author(s): **H.E.M. Meier**, Title: Challenges in climate system modelling for the Baltic Sea, North Sea and Arctic Ocean regions (invited).

Lectures 2015

- Gordon Research Conference (GRC) on Coastal Ocean Modeling, Biddeford, Maine, U.S., 7-12 June 2015, Author(s): **H. E. M. Meier**, Title: Challenges in regional climate system modeling. (invited presentation)

- Scientific Symposium on Harmful Algal Blooms and Climate Change, Göteborg, Sweden, 19-22 May 2015, Author(s): **H. E. M. Meier**, Title: Impact of changing physics on marine ecosystems in future coastal seas. (invited presentation)
- 10th Baltic Sea Science Congress, Riga, Latvia, June 15-19, 2015, Author(s): **H. E. M. Meier**, Title: Challenges in climate system modelling for the Baltic Sea, North Sea, Mediterranean Sea and Arctic Ocean regions.
- Euromarine Foresight Symposium: “Future Coast - Europe, Berlin, 5-7 October, 2015, Author(s): **H. E. M. Meier**, Title: Integrated system modelling for coastal seas. (invited presentation)
- Joint HyMeX-Baltic Earth Workshop on “Joint regional climate system modelling for the European sea regions”, Rome, 5-6 November, 2015, Author(s): **H. E. M. Meier**, M. Reckermann, A. Rutgersson, G. Sannino, and S. Somot, Title: Regional climate system modelling for European sea regions aims of the workshop.
- Baltic Earth/Gulf of Finland PhD Seminar 2015: “ Exchange processes between the Gulf of Finland and other Baltic Sea basins, Tallinn, 19 November, 2015, Author(s): **H. E. M. Meier**, K. Eilola, K. Myrberg, and G. Väli, Title: Physical-Biogeochemical modelling of the Baltic Sea- Gulf of Finland. (invited presentation)
- Szczecin Climate Seminars, Winter Semester 2015/2016, University of Szczecin, Faculty of Geosciences, Szczecin, 3 December, 2015, Author(s): **H.E.M. Meier**, Title: The future of hypoxia in the deep basins of the Baltic Sea. (invited presentation)
- Leibniz Institute for Baltic Sea Research, Institute seminar, Warnemünde, Germany, 16 December 2015, Author(s): **H.E.M. Meier**, Title: Hypoxia in past and future climates of the Baltic Sea.

Lectures 2016

- DEFROST final conference, University Centre in Svalbard (UNIS), Longyearbyen, Svalbard, 2 February 2016, Author(s): I. Wählström and **H.E.M. Meier**, Title: Impact of increasing inflow of warmer Atlantic water into the Arctic Ocean on the sea-air exchange of CO₂ and CH₄ in the Laptev Sea.
- Fakultätskolloquium der Mathematisch-Naturwissenschaftliche Fakultät, Universität Rostock, Antrittsvorlesung, 7 April, 2016: Author(s): **H.E.M. Meier**, Title: Klimaveränderungen der Ostsee im 20. und 21. Jahrhundert - neue Ergebnisse basierend auf regionaler Systemmodellierung. (In German, Changing climate of the Baltic Sea during the 20th and 21st century - new results based upon regional climate system modelling.) (invited presentation)
- Physikalisches Kolloquium der Mathematisch-Naturwissenschaftliche Fakultät, Universität Rostock, 12 Mai, 2016: Author(s): **H.E.M. Meier**, Title: Herausforderungen für die Klimamodellierung der Ostsee. (In German, Challenges in modelling of the Baltic Sea climate.) (invited presentation)
- International Conference on Regional Climate-CORDEX 2016 (ICRC-CORDEX 2016), Stockholm, 17-20 May, 2016: Author(s): **H.E.M. Meier** and Moa Edman, Title: Estimating uncertainties in projections for the Baltic Sea region based upon an ensemble of regional climate system models.
- Fehmarn Belt Days 2016, Hafencity Universität, Hamburg, 20-22 September 2016, Author(s): **H.E.M. Meier**, Title: Impact of climate change on the water exchange between the North Sea and Baltic Sea. (invited presentation)

- 1st Baltic Earth Conference on “Multiple drivers for Earth system changes in the Baltic Sea region”, Nida, Curonian Spit, Lithuania, 13-17 June 2016, Author(s): **H.E.M. Meier** on behalf of the Baltic Earth program, Title: Baltic Earth and Conference Opening.
- Climate Limited-area Modelling Community Assembly, Lüneburg, 22 September 2016, Author(s): **H.E.M. Meier**, Title: Do we need regional climate system models? (invited presentation)
- 15th German-Polish Seminar, Hamburg, 11-12 October 2016, Author(s): **H.E.M. Meier**, Title: Regional climate system modelling for the North Sea and Baltic Sea region - a review. (invited presentation)

Lectures 2017

- International seminar connected to the COCOA annual meeting, Leibniz Institute for Baltic Sea Research Warnemünde, Rostock, Germany, 24 January 2017, Author(s): **H.E.M. Meier**, Title: Challenges in Baltic Sea coastal zone modelling. (invited presentation)
- Baltic Earth Seminar on Saltwater Inflows, Leibniz Institute for Baltic Sea Research Warnemünde, Rostock, Germany, 8 March 2017, Author(s): **H.E.M. Meier**, G. Väli, M. Naumann and K. Eilola, Title: Causes of recently accelerated oxygen consumption rates in the Baltic Sea.
- 11th Baltic Sea Science Congress “Living along gradients: past, present, future” to be held on June, 12 – 16, 2017 in Rostock, Germany, Author(s): **H.E.M. Meier**, A. Höglund, K. Eilola and E. Almroth, Title: Impact of accelerated future global mean sea level rise on hypoxia in the Baltic Sea

Lectures 2018

- Helmholtz Centre for Ocean Research Kiel (GEOMAR), FB1-Seminar, Kiel, Germany, 22 January 2018, Author(s): **H.E.M. Meier**, Title: Integrated Earth System Modeling for the Baltic Sea Region (invited presentation)
- WWF and Coalition Clean Baltic (CCB) side event at the HELCOM Ministerial Meeting in Brussels on “The uncomfortable truth of the BSAP – 10 years down the line towards saving the Baltic Sea”, 6th March 2018, 13:30-15:00, Palais d'Egmont, 8 Place du Petit Sablon, Brussels, Author(s): **H.E.M. Meier** (Leibniz Institute for Baltic Sea Research Warnemünde and Swedish Meteorological & Hydrological Institute), Title: What will the BSAP need to address to meet the challenges of climate change?
- MedCORDEX-Baltic Earth-COST Workshop on “Regional Climate System Modelling for the European Sea Regions”, Universitat de les Illes Balears, Palma de Mallorca, Spain, 14- 16 March 2018, Author(s): **H.E.M. Meier**, Title: Baltic Earth and Integrated Earth System Modeling for the Baltic Sea Region
- 8th GEWEX Open Science Conference: Extremes and Water on the Edge. May 6 - 11, 2018, Canmore, Alberta, Canada, Author(s): **H.E.M. Meier**, Title: Integrated Earth System Modeling for the Baltic Sea Region.
- 2nd Baltic Earth Conference on “The Baltic Sea Region in Transition”, Helsingør, Denmark, 11-15 June 2018, Author(s): H.E.M. Meier, **G. Väli**, M. Naumann, K. Eilola, and C. Frauen, Title: Recently accelerated oxygen consumption rates amplify deoxygenation in the Baltic Sea – observations and model results.

- 2nd Baltic Earth Conference on “The Baltic Sea Region in Transition”, Helsingør, Denmark, 11-15 June 2018, Author(s): **H.E.M. Meier** on behalf of the Baltic Earth program, Title: Baltic Earth and Conference Opening
- Baltic Earth Workshop on “Multiple drivers for Earth system changes in the Baltic Sea region”, Tallinn University of Technology, Tallinn, Estonia, 26- 27 November 2018, Author(s): **H.E.M. Meier**, Title: Response of the hydrography and marine biogeochemistry to multiple drivers in the Baltic Sea region.

Lectures 2019

- Coastal Seminar at Rostock University, 31 January 2019, Author(s): **H. E. M. Meier**, Title: The coastal zone in a Baltic Zone Model.
- Paleolink Workshop, A joint effort to bring together GCM, RCM and Proxy communities, University of Murcia, Spain, 6th-8th February 2019, Author(s): **H. E. M. Meier**, Title: Reconstructing low-frequency climate variability of the Baltic Sea region
- Meeresumweltsymposium 2019, Bundesamt für Seeschifffahrt und Hydrologie, Hamburg, 4-5 June 2019, Author(s): **H. E. M. Meier**, Title: Wird der Ostseeaktionsplan auch unter zukünftigen Klimabedingungen sein Ziel erreichen? (Will the Baltic Sea Action Plan achieve its goal under future climatic conditions?)
- 12th Baltic Sea Science Congress “Making connections for the future” 19-23 August, 2019 in Stockholm, Sweden, Author(s): **H. E. M. Meier**, Moa K. Edman, Kari J. Eilola, Manja Placke, Thomas Neumann, Helén C. Andersson, Sandra-Esther Brunnabend, Christian Dieterich, Claudia Frauen, René Friedland, Matthias Gröger, Bo G. Gustafsson, Erik Gustafsson, Alexey Isaev, Madline Kniebusch, Ivan Kuznetsov, Bärbel Müller-Karulis, Anders Omstedt, Vladimir Ryabchenko, Sofia Saraiva, and Oleg P. Savchuk, Title: Uncertainties of future projections of the Baltic Sea
- 6th Med-CORDEX workshop, Centre International de Conférences, Météo-France, Toulouse, France, November 25-29, 2019, Author(s): **H. E. M. Meier**, Title: Regional climate system modeling within Baltic Earth (invited presentation)
- Seminar at the Finnish Meteorological Institute, 19 Dezember 2019, Author(s): **H. E. M. Meier**, Title: Regional climate system analysis and modeling of the Baltic Sea region" (invited presentation).

Lectures 2020

- 3rd Baltic Earth Conference on “Earth System Changes and Baltic Sea Coasts”, online video conference, 2-3 June 2020, Author(s): **H. E. Markus Meier**, C. Dieterich, M. Gröger. Title: Uncertainties of Baltic Sea future projections under different shared socioeconomic pathways.
- 3rd Baltic Earth Conference on “Earth System Changes and Baltic Sea Coasts”, online video conference, 2-3 June 2020, Author(s): **H. E. Markus Meier** on behalf of the Baltic Earth program, Title: Welcome and Conference Opening.
- Online Conference on Marginal Seas – Past and Future, 16-17 December 2020, 1-6 pm CET, co-organized by Baltic Earth, Author(s): **H. E. Markus Meier**, Title: Hypoxia in Marginal Seas

Lectures 2021

- Workshop on Climate Challenges in the Baltic Sea Region, organized by C3S (ECMWF, DWD), 26-27 May 2021, Author(s): **H. E. Markus Meier** on behalf of the EN-CLIME team, Title: Climate change fact sheets for sustainable Baltic Sea management
- 4th Baltic Sea Marine Spatial Planning Forum, 1-2 June 2021, Author(s): **H. E. Markus Meier** on behalf of the EN CLIME team, Title: Climate Change in the Baltic Sea Region
- Workshop Integrated Earth System Research – Challenges, Approaches and Impacts, Virtual conference, 29th June 2021, 13:00 to 30th June 2021, 14:00 (CEST), Organiser: Leibniz Research Network “Integrated Earth System Research”, Author(s): **H. E. Markus Meier**, Title: The role of the ocean in the Earth system
- Press launch event of the Baltic Earth-HELCOM Climate Change Fact Sheet produced by EN CLIME, 3 September 2021, Author(s): **H. E. Markus Meier** on behalf of the EN-CLIME team, Title: Climate change fact sheet – Direct and indirect parameters (ecosystem)
- 13th Baltic Sea Science Congress “Understanding transitions in the Baltic Sea” 18-22 October, 2021 in Aarhus, Denmark, Author(s): **H. E. M. Meier** on behalf of the BEARs and EN-CLIME teams, Title: Current knowledge about past and future climate changes in the Baltic Sea region (invited keynote speaker)
- The Gulf of Finland Science Days 2021-Estonian Academy of Sciences, Tallinn, 29-30 November 2021, Author(s): **H. E. M. Meier** on behalf of the BEARs and EN-CLIME teams, Title: Current knowledge about past and future climate changes in the Gulf of Finland region (invited keynote speaker)
- Baltic Breakfast, Baltic Sea Centre, Stockholm University, 14 December 2021, Author(s): H. E. M. Meier on behalf of the BEARs and EN-CLIME teams, Title: What do we know about the impact of climate change on the Baltic Sea? (invited speaker) <https://balticeye.org/en/articles/baltic-breakfast-impacts-of-climate-change/>

Lectures 2022

- Lions Club Rostock, Online, 6 March 2022, Author(s): **H. E. M. Meier**, Title: Klimawandel im Ostseeraum, Climate Change in the Baltic Sea Region
- HELCOM Stakeholder Conference 2022, 9-10 March 2022, Author(s): **H. E. M. Meier** on behalf of the BEARs and EN-CLIME teams, Title: What do we know about the impact of climate change on the Baltic Sea? (invited speaker, canceled)
- ESPON Peer Learning Workshop: Climate change adaptation strategies in the Baltic Sea Region, 5 May 2022, Author(s): **H. E. M. Meier**, Title: How is climate change currently affecting the Baltic Sea? (invited speaker)
- Leibniz Institute for Baltic Sea Research Warnemünde Colloquium, 6 May 2022, Author(s): **H. E. M. Meier**, Title: Climate change as a grand challenge of the IOW research programme (invited speaker)
- International JPI Oceans and JPI Climate Knowledge Hub Sea Level Rise Baltic Sea Workshop, 9 May 2022, Author(s): **H. E. M. Meier**, Title: Summary of existing knowledge based upon the Baltic Earth Assessment reports and the Knowledge Hub Sea Level Rise survey results for the Baltic Sea (invited speaker)
- Swedish Meteorological and Hydrological Institute Colloquium, 12 May 2022, Author(s): **H. E. M. Meier**, Title: Investigating hypoxic and euxinic area changes based on various datasets from the Baltic Sea (invited speaker).

- Meeresumweltsymposium 2022, Bundesamt für Seeschifffahrt und Hydrologie, Hamburg, 18-19 May 2022, Author(s): H. E. M. Meier, Title: Der dritte Klimazustandsbericht für die Ostseeregion. (The third climate change assessment report for the Baltic Sea region)
- 4th Baltic Earth Conference on “Assessing the Baltic Sea Earth System”, 30 May – 3 June 2022, Jastarnia, Hel Peninsula, Poland, Author(s): **H. E. Markus Meier** on behalf of the Baltic Earth program, Title: Welcome and Conference Opening.
- Leibniz Institute for Baltic Sea Research Warnemünde (IOW) Colloquium, Online, 6 May 2022, Author(s): **H. E. M. Meier**, Title: Climate change as a grand challenge of the IOW research programme
- Royal Netherlands Institute for Sea Research (NIOZ) - Leibniz Institute for Baltic Sea Research Warnemünde (IOW) Workshop, Online, 23 June 2022, Author(s): **H. E. M. Meier**, Title: Climate Change in the Baltic Sea Region
- The Baltic Stakeholder Conference 2022 - Climate Change in the Baltic Sea (BSC2022), Online, 26-27 September 2022, Author(s): **H. E. M. Meier**, Title: Baltic Earth/HELCOM Fact Sheet on Climate Change in the Baltic Sea (invited speaker)
- EU Strategy for the Baltic Sea Region (EUSBSR) Annual Forum 2022, Lappeenranta, Finland, 28-29 September 2022, Author(s): **H. E. M. Meier**, Title: Baltic Earth/HELCOM Fact Sheet on Climate Change in the Baltic Sea (online invited speaker)
- Kulturkaten Kiek, Prerow, 13 October 2022, Author(s): **H. E. M. Meier**, Title: Do we expect a future increase in the severity of extreme water levels in the Baltic Sea? (In German: Erwarten wir für die Zukunft eine Zunahme der Häufigkeit extremer Wasserstände in der Ostsee?) (invited speaker)
- Keynote lecture on the occasion of the award ceremony of the Richard-Siegmann-Medal by the Richard-Siegmann foundation, 8 November 2022, Author(s): **H. E. M. Meier**, Title: "What do we know about the future climate in Rostock and the Baltic Sea region?" (In German: „Was wissen wir über das zukünftige Klima in Rostock und der Ostseeregion?“) (invited speaker)
- Assessment of medium-sized ships in Germany by the Science Council (Begutachtung der mittelgroßen Schiffe in Deutschland durch den Wissenschaftsrat), 16 – 17 November 2022, Author(s): **H. E. M. Meier**, Title: Observational data for basic climate research (In German: Beobachtungsdaten für die Klimagrundlagenforschung) (invited speaker)

Lectures 2023

- Lecture and panel discussion of experts from the John Nurminen Foundation (Diskussion der Expertenrunde der John Nurminen Stiftung), Helsinki, Finland, 7 February 2023, Author(s): **H. E. M. Meier**, Title: Climate change in the Baltic Sea region. (invited speaker)
- Lecture within the sustainMare program, online, 10 May 2023, Author(s): **H. E. M. Meier**, Title: Future climate change in the North Sea and Baltic Sea regions (In German: „Zukünftige Klimaänderungen in Nord- und Ostsee“)
- International Conference on Regional Climate, ICRC-CORDEX 2023, 25-29 September 2023, Trieste, Italy, Author(s): **H. E. M. Meier** and the Baltic Earth Assessment Report team, Title: Regional Climate System Modeling for the Baltic Sea region – an overview about Baltic Earth activities (invited speaker)

- 5th Data Community of Practice (CoP) Workshop (eMSP-NBSR), 11 October 2023, Author(s): **H. E. M. Meier**, Title: Baltic Earth/HELCOM Fact Sheet on Climate Change in the Baltic Sea (invited speaker)
- Baltic Earth Colloquium, online, 4 December 2023, Author(s): **H. E. M. Meier**, Title: Past trends in the water balance of the Baltic Sea

Projects

(Third party funding total 11,986 M€)

- BALTEX (Baltic Sea Experiment), my PhD project was funded partly from the German Ministry of Research within BALTEX:
[http://w3.gkss.de/baltex/baltex home.html](http://w3.gkss.de/baltex/baltex%20home.html)
- BASYS (Baltic Sea System Study), EU funded MAST-III project MAS3-CT96-0058 and IC20-CT96-0080, 1996-1998, project participant:
[http://www.io-warnemuende.de/Projects/Basys/overview/overview 1.htm](http://www.io-warnemuende.de/Projects/Basys/overview/overview%201.htm)
- SWECLIM (Swedish Regional Climate Modelling Programme), funded by the Foundation for Strategic Environmental Research (MISTRA) and by the Swedish Meteorological and Hydrological Institute (SMHI), 1997-2003, project participant:
<http://www.smhi.se/sweclim/>
- CARTUM (Comparative Analysis and Rationalization of Second-Moment Turbulence Models), EU Concerted Action MAS3-CT98-0172 and IC20-CT98-0104, 1999-2001, project participant:
[http://www.ifm.uni-hamburg.de/ wwwto/ResearchTopics/CARTUM/carthome.htm](http://www.ifm.uni-hamburg.de/wwwto/ResearchTopics/CARTUM/carthome.htm)
- SEAREG (Sea Level Change Affecting the Spatial Development in the Baltic Sea Region), funded by the European Regional Development Fund (ERDF) within the Baltic Sea Region INTERREG IIIB program, 2002-2005, Co-PI for SMHI and the sub-contractor INREGIA AB Stockholm, workpackage leader, 475 000 Euro:
<http://www.gsf.fi/projects/seareg/>
- ICEMON (Sea ice monitoring in the polar regions), funded by Global Monitoring for Environment and Security GMES is a joint initiative of the European Space Agency (ESA) and the European Commission, ESA ESRIN Contract No. 17060/03/I-IW, 2003-2004, project participant:
<http://www.nersc.no/ICEMON/>
- GLIMPSE (Global implications of Arctic climate processes and feedbacks), European Commission project EVK2-CT-2002-00164, 2002-2005, project participant:
<http://www.awi-potsdam.de/www-pot/atmo/glimpse/index.html>
- SNIC (Swedish National infrastructure for computing, computational resources from SWEGRID, Swedish National Allocation Committee, PI, SNIC 004/03-74, 2004, 11 738 cpuh/month; PI, SNIC 011/04-10, 2005, 8 000 cpuh/month; PI, SNIC 007/05-44, 2006, 13 000 cpuh/month; PI, SNIC 021/06-8, 2007, 32 000 cpuh/month)
<http://www.swegrid.se/>, <http://www.snic.vr.se/>

- BALTDER (Centre of Excellence for Baltic Development, Education and Research, European Commission project EVK3-2002-00502, 2002-2005, external expert and advisor):
<http://www.ocean.univ.gda.pl/baltder/>
- MUSCAD (Multi-proxy Studies of Climate Anno Domini), organizer of a workshop on “Climate variations in Sweden during the past 2000 years”, joined the network during 2002-2006
<http://www.geol.lu.se/proxy/>
- AOMIP (Arctic Ocean Model Intercomparison Project, since 2005), project participant (without funding)
<http://fish.cims.nyu.edu/project/aomip/overview.html>
- BACC (BALTEX Assessment of Climate Change for the Baltic Sea Basin), member of the writing team of chapter 2 and 3
<http://dvsun3.gkss.de/BACC/>
- DAMOCLES (Developing Arctic Modelling and Observing Capabilities for Long-term Environmental Studies, 2005-2009), project participant <http://www.damocles-eu.org>
- “Modeling climate variability of the Arctic Ocean in past and future climates with special focus on changing sea-ice”, Swedish Research Council (Vetenskåpsrådet), project-no. 621-2006-5030, 2007-2009, PI, 1 822 500 SEK (192 000 Euro)
<http://www.vr.se>
- “Sensor Networks to Monitor Marine Environment with Particular Focus on Climate Changes”, Swedish Governmental Agency for Innovation Systems (Vinnova), project-no. P29461-1, 2007-2009, under-consult of the Swedish Institute of Computer Science AB (SICS), PI: Dr. Thiemo Voigt, 1 500 000 SEK
<http://www.vinnova.se>
- “Investigating harmful algae blooms in future climate of the Baltic Sea”, The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), project-no. 212-2006-1993, 2007-2008, PI, 1 659 450 SEK (175 000 Euro)
<http://www.formas.se>
- “Fluid and climate dynamics - Large scale simulations with applications to turbulence research and geophysics”, Knut and Alice Wallenberg foundation and the Swedish Infrastructure for Computing (SNIC), a unit of the Swedish Research Council, 2008-2011, Co-PI for SMHI and MISU, PI: Prof. Erland Källén, MISU, total 25.4 million SEK for a climate computing resource
- “Simulations of some engineering methods proposed to improve oxygen conditions in the Baltic proper”, Baltic Sea 2020 foundation, 2007, Co-PI for SMHI, PI: Dr. Bo Gustafsson, Göteborg University, 420 000 SEK
- Nolce (Nordic Observations of Ice Cover Extinction), Nordic Council of Ministers, 2007, 2009, 2010, Co-PI for SMHI, PI: Dr. Jari Haapala, Finnish Institute for Marine Research, 77 000 SEK (2007), 60 000 DKK (2009), 60 000 DKK (2010)

- NetICE (Nordic Network on sea-ice research), NordForsk, 2008-2010, Co-PI for SMHI, PI: Prof. Jorma Kuparinen, Helsinki University, 900 000 NOK (for the whole network) (<http://www.helsinki.fi/netice>)
- ECOSUPPORT (Advanced modeling tool for scenarios of the Baltic Sea ECOSystem to SUPPORT decision making), BONUS+ program, 2009-2011, PI and coordinator, total funding: about 1.6 mio Euro, 3 649 802 SEK for SMHI
- INFLOW (Holocene saline water inflow changes into the Baltic Sea, ecosystem responses and future scenarios), BONUS+ program, 2009-2011, Co-PI for SMHI, PI: Dr. Aarno Kotilainen, Geological Survey of Finland, 2 301 651 SEK
- AMBER (Assessment and Modelling Baltic Ecosystem Response), BONUS+ program, 2009-2011, Co-PI for SMHI, PI: Dr. Joachim Dippner, Leibniz Institute for Baltic Sea Research Warnemünde, 1 347 342 SEK
- BalticWay (The potential of currents for environmental management of the Baltic Sea maritime industry), BONUS+ program, 2009-2011, Co-PI for SMHI, PI: Prof. Tarmo Soomere, Institute of Cybernetics at Tallinn University of Technology, 2 379 501 SEK
- SAFEWIN (Safety of winter navigation in dynamic ice), EU/FP7, 2009-2012, Co-PI for SMHI, PI: Prof. Pentti Kujala, Helsinki University of Technology, 377 000 Euro
- ABNORMAL (A Baltic and North Sea model eutrophication assessment in a future climate), Nordic Council of Ministers, 2009, Co-PI for SMHI, PI: Dr. Morten Skogen, Institute of Marine Research, Bergen (Norway), 70 000 DKK (2009), 65 000 DKK (2010), 50 000 DKK (2011)
- “Ocean modelling of Kattegat and Skagerrak”, commonly funded by Göteborg University, Swedish Board of Fisheries, Swedish Environmental Protection Agency (Dnr. 2356835-09Nh), Länsstyrelse i Västra Götaland, Västragötalandsregionen (Dnr. 612-0690-09), 2010, PI, 450 000 SEK
- “Advanced Simulation of Arctic climate change and impact on Northern regions” (ADSIMNOR), The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), Strategic Research Area, project-no. 214-2009-389, 2010-2013, Co-PI for SMHI/Ocean Research, PI: Prof. Colin Jones, SMHI/Rosby Centre, 3 200 000 SEK (for a PhD position)
- “Impact of accelerated future global mean sea level rise on the phosphorus cycle in the Baltic Sea”, The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), project-no. 214-2009-577, 2010-2012, PI, 4 671 000 SEK (492 000 Euro)
- “Integrated Management of Agriculture, Fishery, Environment and Economy” (MAFIA), Danish Council for Strategic Research (DSF), 2010-2013, Co-PI for SMHI, PI: Prof. Bo Riemann, University of Aarhus, 216 000 DKK
- BEAM (Baltic Ecosystem Adaptive Management), The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), Stockholm University’s Strategic Marine Environmental Research Funds, 2010-2015, Co-PI for Meteorological Institute at Stockholm University (MISU), PI: Prof. Kåre Bremer, Stockholm University, in total 41.7 MSEK (raised funding for a three-year research position at MISU, in total 3 170 000 SEK for MISU and SMHI)
- DEFROST - “Impacts of a changing cryosphere - depicting ecosystem-climate feedbacks from permafrost, snow and ice”, Nordic Center of Excellence on Interaction

between Climate Change and the Cryosphere, 2011-2015, Co-PI for SMHI, PI: Torben R. Christensen, Lund University, 1 250 000 NOK (1 postdoc position)

- NorMER - “The Nordic Centre for Research on Marine Ecosystems and Resources under Climate Change”, Nordic Centre of Excellence on Climate Change Effects on Marine Ecosystems and Resource Economics, 2011-2015, Co-PI for SMHI, PI: Prof. Nils Christian Stenseth, University of Oslo, project in total 30.5 MNOK, SMHI 1.5 MNOK.
- KLIWAS - “Impacts of Climate Change on Waterways and Shipping - Development of Adaptation Options”, Federal Ministry of Transport, Building, and Urban Development (BMVBS), Germany 2011-2012, SMHI is under-consult of the Federal Maritime and Hydrographic Agency (BSH), Germany, 195 000 EURO
- Interreg projekt, “Hav möter land - klimat, förvaltning och samhällsplanering tillsammans” (KASK), 2010-2013, project totally 3.8 mio EUR, FoUo 3915+360 hours, coordinator: Länsstyrelsen i Västra Götalands län
- “Impact of changing climate on circulation and biogeochemical cycles of the integrated North Sea and Baltic Sea system”, The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), project-no. 214-2010-1575, 2011-2013, PI, 5 170 000 SEK (544 000 Euro)
- MyOcean - 2010 Research and Development call, No. FP7-SPACE-2007-1, EU/FP7, “Towards operational modelling of the Baltic Sea using NEMO”, 2011, PI (involved countries Sweden, Denmark, Finland), 35 000 Euro in total (15,397 Euro for SMHI)
- SNIC (Swedish National infrastructure for computing), Applications for large scale allocations coordinated by the Swedish National Allocations Committee (SNAC), “Regional climate modelling for the North Sea and Baltic Sea”, PI, SNIC 002/12-25, 2012-2013, 200 000 core hours/month;
- Research projekt on “Flooding risks at Swedish coasts: extreme situations in present and future climates” funded by the Insurance company “Länsförsäkringar”, 2013-2015, PI, 2 089 375 SEK
- North Sea Region Climate Change Assessment (NOSCCA), Lead author of the chapter 3.b Projected changes in the Norths Sea (and interface regions), 2011-2015, no funding
- “Reconstructing and projecting Baltic Sea climate variability 1850-2100”, Swedish Research Council (Vetenskapsrådet), project-no. 2012-23233-96678-38, DNR 2012-02117, 2013-2015, PI, 2 100 000 SEK (221 000 Euro)
- “Impact of future cryospheric changes on northern hemisphere. Climate, green growth and society (GREENICE)” funded by Top-level Research Initiative (TRI), Norden, 2014-2016, Co-PI for SMHI, PI: Prof. Noel Keenlyside, University of Bergen, 3 750 000 NOK (36 PMs)
- SNIC (Swedish National infrastructure for computing), Applications for large scale allocations coordinated by the Swedish National Allocations Committee (SNAC), “Impact of changing climate on biogeochemical cycling in the North Sea and Baltic Sea”, PI, SNIC 2013/11-22, 2013-2014, 250 000 core hours/month
- COCOA - “Nutrient Cocktail in coastal zones of the Baltic Sea”, BONUS program, 2014-2017, Co-PI for SMHI, PI: Prof. Jacob Carstensen, Aarhus University, Denmark, project in total 4 069 013 EURO, SMHI 396 648 EURO or 3 500 000 SEK.

- “Cyanobacteria life cycles and nitrogen fixation in historical reconstructions and future climate scenarios (1850-2100) of the Baltic Sea”, The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas), project-no. 214-2013-1449, 2014-2016, PI, 5 135 000 SEK (541 000 Euro)
- BalticAPP - “Wellbeing from the Baltic Sea - applications combining natural science and economics”, BONUS program, 2015-2017, Work Package 1 leader and Co-PI for SMHI, PI: Prof. Kari Hyytiäinen, University of Helsinki, Finland, project in total 1 998 560 EURO, SMHI 301 500 EURO or 2 788 875 SEK.
- STORMWIND - “Strategic and Operational Risk Management for Wintertime Maritime Transportation System”, BONUS program, 2015-2017, Co-PI for SMHI, PI: Prof. Pentti Kujala, Aalto University (AALTO), Finland, project in total 1 996 654 EURO, SMHI 321 480 EURO or 2 973 690 SEK.
- SNIC (Swedish National infrastructure for computing), Applications for large scale allocations coordinated by the Swedish National Allocations Committee (SNAC), “Impact of changing climate on biogeochemical cycling in the North Sea and Baltic Sea - part 2”, PI, SNIC 2014/8-36, 2014-2015, 250 000 core hours/month
- BACC II (BALTEX Assessment of Climate Change for the Baltic Sea Basin), lead author for chapter 13 (<http://www.baltic-earth.eu/BACC2/index.html>)
- International advanced PhD course on “Impact of climate change on the marine environment with special focus on the role of changing extremes, 24 - 30 August 2015, co-organized by the “Baltic Ecosystem Adaptive Management (BEAM) and Baltic Earth programmes, PI, the application for the doctoral course was awarded 295 000 SEK or 31 053 EUR from BEAM.
- ARCPATH - “Arctic Climate Predictions: Pathways to Resilient, Sustainable Societies, Nordic Center of Excellence in Arctic Research, Nordforsk, 2016-2019, Co-PI for SMHI, PI: Dr. Yongqi Gao, Nansen Environmental and Remote Sensing Center (NERSC), Bergen, Norway, project in total 28 mio NOK, SMHI 3 893 389 NOK.
- “Per Hall”, Swedish Research Council (Vetenskapsrådet), DNR 2015-03717, 2016-2019, Co-PI for SMHI, PI: Prof. Per Hall, ??? SEK (??? Euro)
- INTEGRAL “Integrated carbon and trace gas monitoring for the Baltic Sea, BONUS program, 2017-2019, Work Package 6 leader and project member for IOW, PI: Prof. Gregor Rehder, IOW, project in total 2 111 038 EUR, IOW (Meier): 33 person months for one postdoc
- RADO – „Ran an die Ostsee“, Co-PI for UI, PI: Prof Dr. U. Bathmann, IOW, project in total about 80 000 EUR
- CoastalFutures “DAM Schutz und Nutzen – CoastalFutures: Zukunftsszenarien zur Förderung einer nachhaltigen Nutzung mariner Räume; Vorhaben: Szenarien für Ökosystemleistungen“, 2021-2024, PI: Corinna Schrum (Hereon), Co-PI for IOW, Förderkennzeichen: 03F0911B, 835.806 €