



Baltic Earth

Earth System Science for the Baltic Sea Region

Baltic Earth
Newsletter
No. 5, December
2018



Merry Christmas
and a Happy New Year
from the International
Baltic Earth Secretariat!

Marcus, Silke and Hans-Jörg

Welcome to the Baltic Earth Newsletter No. 5!

The past year had three major Baltic Earth events: The 2nd Baltic Earth Conference in Helsingør, Denmark in June, a Workshop on "Regional Climate System Modelling for the European Sea Regions" on Mallorca, Spain, in March, and the Workshop on Multiple Drivers in Tallinn, Estonia, in November. For the next year, there are many interesting events in the pipeline as well, and the **deadline for the Baltic Earth sessions at the EGU General Assembly in April in Vienna is on 10 January!** Later in the year, we will have a large Baltic Earth Workshop on "Hydrology of the Baltic Sea region" in St. Petersburg, Russia, in the second week of October 2019; this will be back-to-back to the celebrations of the 100 years birthday of the Russian State Hydrological Institute. More details will be distributed as soon as possible, but if you are interested in the hydrology of our region, already now mark this time slot in your calendar!

The positive trend towards a strong Baltic Earth community of young researchers is continuing: in 2019, we will have five events for students and young researchers, which Baltic Earth organizes or contributes to!

But most importantly... the BEARs are coming! From the very beginning of Baltic Earth, the production of assessment reports similar to BACC has been on the agenda for the Grand Challenges and other important research fields. Now the process has been initiated to prepare the Baltic Earth Assessment Reports (BEAR), of which the update to BACC II is a prominent one.

Baltic Earth is engaging in many activities to foster regional Earth science in the Baltic Sea region and the scientific community. You as recipient of this Newsletter are a part of this community!

Marcus Reckermann
International Baltic Earth Secretariat



Baltic Earth Assessment Reports

The BEARs are coming!

One of the goals of Baltic Earth from the very start has been the assessment of the current state of the science in different research fields in the Baltic Earth context, similar to the BACC approach for climate change. Now, 6 years after the establishment of Baltic Earth, and 2 international conferences, 23 workshops, seminars and sessions, and 5 summer schools later, a series of extensive assessment reports, called BEAR (Baltic Earth Assessment Reports), is underway. For each of the Baltic Earth Grand Challenges, a team of experts from the Baltic Earth network is now processing the current state of knowledge in the respective research fields, including uncertainties and gaps in knowledge. [More ...](#)

BACC III and collaboration with HELCOM

BACC II was the recent large effort of Baltic Earth to provide easy access to the distributed knowledge on climate change and its impacts on the Baltic Sea region. It was clear that this topic would be treated prominently in the scope of the BEARs and that an update to BACC II would be one of the reports. Unlike BACC I and II, this will not be done in the form of a comprehensive text book, but rather as a short digest of what we know from BACC II, and which new knowledge has been published since the editorial deadline of BACC II.

HELCOM has been involved in the BACC process from the very beginning of BACC I, and two thematic assessment reports on climate change were published by HELCOM which were based on BACC I and II (HELCOM Thematic Assessment 2007, 2013). HELCOM, recognizing the impacts of climate change on the issues it traditionally deals with, decided to more prominently include climate change issues into its work and to prepare an easy-access “fact sheet” to summarize the state of science for decision makers and the public. To assist in this process, HELCOM will install an expert panel called EN Clime (Expert Network for Climate Change), to which Baltic Earth scientists and BACC authors will contribute. The fact sheets and the updated Baltic Sea Action Plan, scheduled for 2021, will be based on the upcoming BACC III report as well as the earlier, comprehensive BACC books. Thus, the collaboration of Baltic Earth and HELCOM concerning climate change issues deepens, which is beneficial concerning the incorporation of these issues into the regional political agenda.

[Recent events](#)



Conference report

2nd Baltic Earth Conference: The Baltic Sea Region in Transition

Shortly before the scandinavian mid-summer in June, the Baltic Earth scientific community met in Helsingor, Denmark. The 2nd Baltic Earth Conference attracted 132 scientists from 15 countries to present and discuss Baltic Earth related research, and 126 presentations were given! A great result was the strong participation by early career scientists (30%), who also had their own networking side event. The aftermath page has conference photos, presentations, session summaries, the programme and participant list as well as the conference proceedings. [More...](#)

Workshop report

[MedCORDEX-Baltic Earth-COST Workshop on](#)

Regional Climate System Modelling for the European Sea Regions

About 50 scientists from the MedCORDEX and Baltic Earth communities gathered in March 2018 at the University of the Balears in Palma de Mallorca to discuss current issues in regional climate system modelling, in particular the coupling of processes in the atmosphere and the sea. This was already the second joint meeting of the Baltic and Mediterranean climate modelling communities. In the future, the two communities plan to share experience and expertise through common activities, like a common discussion forum, workshops and joint research projects and papers. [More...](#)



Workshop report

Baltic Earth Workshop on "Multiple Drivers of Earth System Changes in the Baltic Sea region"

We are happy that so many experts from the different research fields followed our invitation and found the time to come to Tallinn on 26 and 27 November 2018 to speak at the workshop! With more than 110 participants attending, the participation was overwhelming. Next to the 31 oral presentations, we had 32 posters, and a high number of young scientists from all over the Baltic Sea region. This, and the open and curious spirit at the workshop showed that the topic is of high interest to many scientists, and is also on the agenda of decision makers and needs to be taken up. [More...](#)

[Upcoming Conferences](#)



Baltic Earth Sessions at EGU General Assembly, Vienna, Austria, 7–12 April 2019

Climate and other drivers of change: Interlinkages, ramifications and impacts in coastal regions

The regional climate change assessment reports for the Baltic (BACC I and II) and North Sea regions (NOSCCA) have recently estimated the extent and impact of climate change on the environments of the North and Baltic Sea regions. A major outcome of these reports is the finding that climate change is one of multiple drivers, which have a continuing impact on terrestrial, aquatic and socio-economic (resp. human) environments. These drivers interact with regional climate change in ways, which are not completely understood.

This session invites contributions, which focus on the connections and interrelations between climate change and other drivers of environmental change, be it natural or human-induced, in different regional seas and coastal regions. Observation and modelling studies are welcome, which describe processes and interrelations with climate change in the atmosphere, in marine and freshwater ecosystems and biogeochemistry, coastal and terrestrial ecosystems as well as human systems. In particular, studies on socio-economic factors like aerosols, land cover, fisheries, agriculture and forestry, urban areas, coastal management, offshore energy, air quality and recreation, and their relation to climate change, are welcome.

The aim of this session is to provide an overview over the current state of knowledge of this complicated interplay of different factors, in different coastal regions all over the world.

[More...](#)

Open session on coastal and shelf seas

[More...](#)

Abstract Deadline: 10 January 2019, 13:00 CET



The 12th **Baltic Sea Science Congress 2019** will take place in Stockholm. In the Royal National Park, neighbouring the archipelago, Stockholm University will gather the marine research community for discussions on the last 10 years of Baltic Sea research and how it has adopted new interdisciplinary approaches and scientific disciplines. Policy aspects of the latest research will also be discussed.

New insights from the interlinked processes in the catchment and the coastal zone as growing research foci shall be provided. The congress will present advances in our understanding of biogeochemical cycles in the open Baltic Sea as well as new approaches addressing genomics, population structure and function, evolutionary changes and how climate change and human impact changes the system. Baltic Earth scientists are encouraged to submit an abstract and show the Baltic Earth logo!

Abstract Deadline: 28 February 2019

EarlyBird Registration: 31 January 2019.

[More...](#)

[Summer Schools and Courses](#)



1st International Baltic Earth Winter School

Analysis of Climate Variability

The first Baltic Earth Winter School will take place in Warnemünde, Germany, 22-29 March 2019. At this Winter School, students will be introduced to the analysis of climate variability from years to millennia as recorded from instrumental data, historical documents and proxy data such as tree ring data or sediment cores. The focus will be on the climate of the Baltic Sea region but an overview on global climate variability and processes in the atmosphere, ocean, sea-ice and land surface relevant for the climate system will be introduced as well. For the analysis of climate variability, both statistical methods and numerical modeling are used. Methods for the detection of systematic changes in climate and for the attribution of drivers to these changes will be presented and discussed. The course will introduce fundamentals of statistics, time series analysis, multivariate data analysis, uncertainty analysis in statistical methods and strategies of statistical analysis. [More...](#)



5th Baltic Earth Summer School on Askö, Sweden

Climate of the Baltic Sea Region

This is a preliminary announcement for our fifth Summer School in the Swedish archipelago, tentatively scheduled for 26 August to 2 September 2019. The course will focus on past and future changes in climate of the Baltic Sea region. Students will be introduced into fundamental processes of the atmosphere, ocean, sea-ice and land surface with relevance for the climate system. We will start from basic principles and equations of motion that describe the circulation and dynamics in the atmosphere, ocean and sea-ice. Further basic methods of the analysis and modeling of the regional climate system will be introduced, including the statistical analysis of time series to identify changes in regional climate. We will explain atmospheric pressure patterns of the large-scale circulation like the North Atlantic circulation with influence on the Baltic Sea and the corresponding catchment area. [More details and the application deadline soon on the Baltic Earth website!](#) [More...](#)



IOOCP/BONUS-INTEGRAL Training course, Sven Lovén Center for Marine Sciences, Kristineberg, Sweden 10-19 June 2019

Instrumenting our ocean for better observation: A training course on a suite of biogeochemical sensors

The goal of this course is to train a new generation of marine biogeochemists in the use of a suite of biogeochemical sensors and to assure the best possible quality of the data produced. The workshop will be limited to a total of 28 participants at a PhD/early postdoc level selected through a competitive process at the discretion of the organizers.

This intensive training course will provide trainees with lectures and hands-on field and laboratory experience with sensors (deployment, interfacing, troubleshooting and calibration), will provide in-depth knowledge on data reduction and quality control as well as data management. This course will also provide an overview on the use of remote sensing, modelling and intelligent data extrapolation techniques.

The application process is expected to be open by mid-December 2019. [More...](#)

Summer Course in Estonia, 15-20 September 2019

Applications of remote sensing in the Baltic Sea region

Remote sensing allows the study, mapping, monitoring and management of the Earth's surface, atmosphere and oceans, and also human activities like agriculture and forestry.

An advanced training course of remote sensing applications for professionals and early career scientists will be offered **15-20 September 2019 in Southern Estonia.**

Participants will attend lectures and hands-on computing exercises with the aim to provide an integrated end-to-end perspective from measurement techniques to end-user applications. The course is co-organized by the University of Tartu and the International Baltic Earth Secretariat at Helmholtz-Zentrum Geesthacht under the umbrella of Baltic Earth. **More information will be available soon... [More...](#)**





YOUMARES 2019 in Bremen

YOUMARES is the largest meeting for young marine researchers in Germany and an excellent platform to present results in a professional atmosphere which, at the same time, still manages to avoid the sometimes overwhelming character of many scientific meetings. YOUMARES is a scientific conference series for international Bachelor, Master, and PhD students, those who want to study marine sciences and those who have already finished. The wide range of topics with interdisciplinary character is one of the most important aspects of YOUMARES but the easy-to-talk-to atmosphere is what makes it special. YOUMARES welcomes you, no matter if you want to present a talk or a poster, if you want to help during the event or if you want to listen to presentations and meet new people in marine sciences. Everybody is welcome!

In January 2019 we will start with the publication of (y)our "Call for Sessions", which asks you to get involved in **YOUMARES 2019 (24-27 September 2019) in Bremen, Germany**. We would like to gather a comprehensive spectrum of topics which should be covered during the conference.

Have a look at www.youmares.com to stay updated and register for our newsletter! If you want to get involved during the planning phase, to help at the actual conference or if you want to become sponsor, please send an email to info@youmares.com. We are happy to hear from you!
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