



Baltic Earth

Earth System Science for the Baltic Sea Region

**Baltic Earth
Newsletter
No. 3, June 2017**

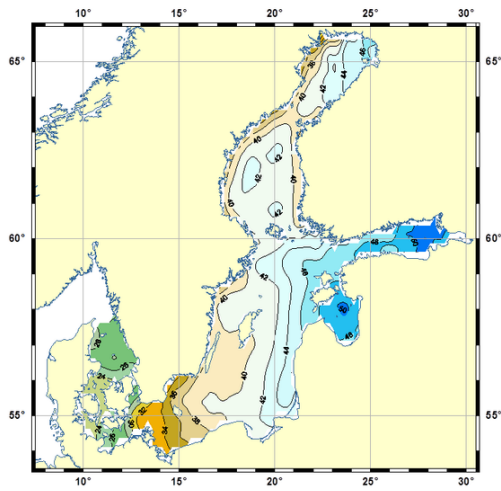
Welcome to the third Baltic Earth Newsletter! The past months have seen the finalization of the [Baltic Earth Science Plan](#). It is now available as download from the [Baltic Earth website](#) and as print copy upon request. The intention of this brief document is to attract the interest of scientists and stakeholders in order to promote participation and engagement in the Baltic Earth research fields. The scientific agenda is a work in progress, and so this document is intended to be a living document, to be updated from time to time.

In the first half of 2017 we had two interesting workshops, on "[Coupled atmosphere-ocean modeling for the Baltic Sea and North Sea](#)", and on "[Remote sensing applications for scientific research in the Baltic Sea region](#)" (by ESA, the European Space Agency), both of which will hopefully lead to further joint activities (more in the next Newsletter). And in the late summer, we are looking forward to the third consecutive Baltic Earth Summer School on Askö, Sweden.

We would like to encourage you to send us short scientific communications, event or project reports, announcements or short news from your institution or project for publication in this Newsletter. We from the International Baltic Earth Secretariat wish you a pleasant and relaxed summer!



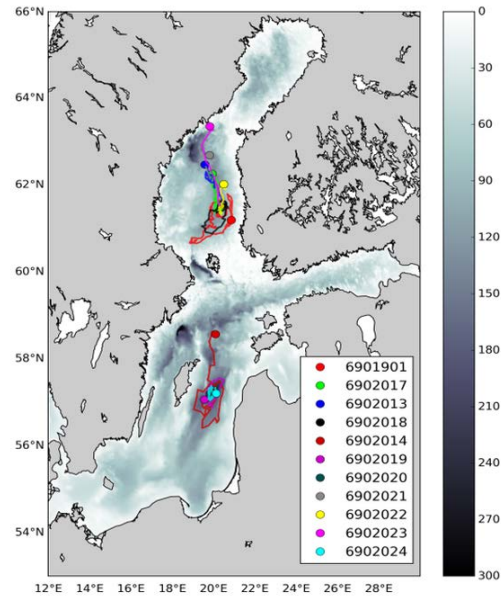
[Short communications](#)



Seasonal variability of the Baltic Sea level based on satellite altimetry

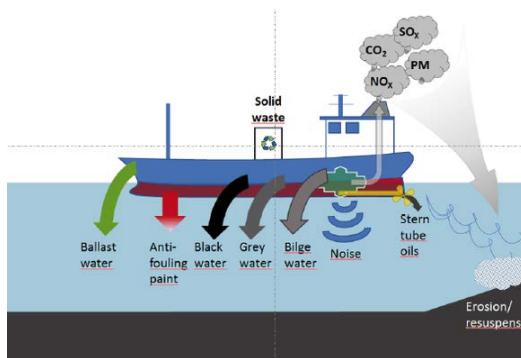
Sea level rise is one of the most discussed and potentially dangerous consequences of climate change. The situation in the Baltic Sea is somewhat complicated due to regional factors like the water balance and land uplift. This short communication by Nizhnikovskaya and Lebedev shows an interesting aspect of the regional sea level in the Baltic Sea: its seasonal variability. Their results imply that there are marked regional differences when looking at the seasonal variability of Baltic Sea sea levels.

[More...](#)



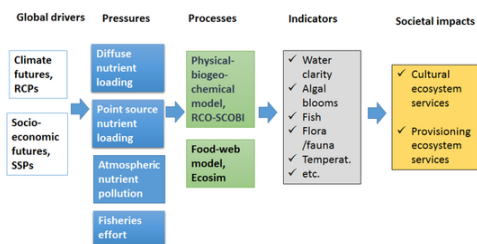
FMI's Baltic Sea Argo Update

Argo floats are free floating, autonomously operating instruments deployed in the open waters which constantly measure temperature, salinity and currents. They have been a major achievement in getting an idea about the physical state of the oceans. The Finnish Meteorological Institute (FMI) has used Argo floats since 2010, and has recently also added an oxygen sensor to one of the floats. [More...](#)



Sustainable shipping and environment of the Baltic Sea

The Baltic Sea is one of the most intensively used sea areas in the world while the Baltic Sea itself is particularly vulnerable regarding its impacts. The BONUS SHEBA project brings together experts from the all relevant research disciplines to analyse the impacts of shipping in the Baltic Sea, and to support development of related policies. [More...](#)



BALTICAPP - Combining natural science and economics

The Baltic Sea region is affected by multiple human impacts, e.g. climate change, eutrophication and urbanization. The BONUS project BALTICAPP introduces the socio-economic factor into the analysis and development of new tools for achieving a good environmental status of the Baltic Sea region. [More...](#)

Announcements



Dedicated session on regional seas at AGU Fall meeting:

Comparing Marginal Seas around the World – Coping with Similar Problems in Different Ways?

The idea to bring Baltic Earth scientists together with scientists from other regional seas is not quite new, and there have been successful collaborations with the North Sea, Mediterranean and other research communities. Recently, a new Working Group on Regional Seas has been established. As a first activity, we co-convene this session at the AGU Fall meeting together with two renown colleagues from the US and China. Abstract submission is 2 August 2017!

[More...](#)

SHIPPING AND THE ENVIRONMENT - From Regional to Global Perspectives

This international conference on the environmental impact of shipping will take place in Gothenburg, Sweden, on 24-25 October 2017. Topics include impacts of shipping on air pollution and climate change, human health, land ecosystems, marine pollution and ecosystems, under- and overwater noise and its impacts on marine biota and human well-being. The conference is jointly organised by the Bonus project SHEBA and by the International Surface Ocean - Lower Atmosphere Study (SOLAS).

[More...](#)



2nd Baltic Earth Conference in Helsingör, Denmark, 11-15 June 2018

The Baltic Sea Region in Transition

This second Baltic Earth Conference will take place at the western limits of the Baltic Sea, in the very area where the Danish Straits control the flows between the North and Baltic Seas. The title of the conference refers to this geographical property but also to transition processes in the Baltic Sea and its catchment basin, as well as in the regional climatic and socio-economic systems. Helsingör is an attractive city with a rich maritime heritage. A Second Announcement and Call for Papers will be issued in autumn, so check back on the Baltic Earth website. [More...](#)

Short news...

Baltic Earth back in the GEWEX family

For 20 years, BALTEX had been associated with GEWEX, the Global Energy and Water Exchanges programme of the World Climate Research Programme WCRP, as a Regional Hydroclimate Project (RHP). After the transition to Baltic Earth with a modified steering group and portfolio, it was decided to continue this fruitful international cooperation and re-apply for status as RHP in the GEWEX Hydroclimatology Panel (GHP). At the recent meeting in Gif-sur-Mer, France in October 2016, Baltic Earth was accepted as initial phase RHP by the GHP steering group. [More on GEWEX...](#)

High BACC II book download numbers

The book was published in April 2015 as Open Access book with Springer, and the download numbers have since been astonishing. Springer has registered a total of approximately 90,000 chapter downloads, of which about 50,000 were in 2015. With that, BACC II was among the top 25% most downloaded Springer eBooks in the relevant collection in 2016. [More on BACC and download links for BACC I and II ...](#)

BONUS Call 2017 "Synthesis" coming up

BONUS will open a desk-top study call seeking for successful project proposals on topics to be announced on 9 August 2017. This call will not be for actual hands-on research but for synthesizing and assessing the research which has been done. It has been a much neglected task for scientists to provide decision makers and the public with a "critical review of research outputs and an identification of knowledge gaps and further research needs", so this is highly appreciated! Projects are envisaged to start in September 2018 at the earliest with each project running for a maximum of eighteen months. [More...](#)

New and interesting books...

A small selection of new books with relevance for Baltic Earth (recently or soon to be published):

Biological Oceanography of the Baltic Sea

Pauline Snoeijs-Leijonmalm, Hendrik Schubert and Teresa Radziejewska (Eds.)
The first comprehensive textbook on the biology and ecology of the Baltic Sea
Springer 2017, ISBN 978-94-007-0668-2 ([Link...](#))

Coastline Changes of the Baltic Sea from South to East

Past and Future Projection
Jan Harff, Kazimierz Furmanczyk and Hans von Storch (Eds.)
An innovative overview of modelling procedures for the hindcast and prediction of coastal morphogenesis
Springer 2017, ISBN 978-3-319-49894-2 ([Link...](#))

Biogeochemical Transformations in the Baltic Sea

Observations Through Carbon Dioxide Glasses
Bernd Schneider and Jens Daniel Müller
A coherent description of the major features of the Baltic Sea biogeochemistry as inferred from its unique marine CO₂ system
Springer 2018, ISBN 978-3-319-61698-8 ([Link...](#))

Featured Publication

Towards a healthier Gulf of Finland – Results of the International Gulf of Finland Year 2014

Journal of Marine Systems
Edited by Kai Myrberg, Urmas Lips and Marina Orlova
Volume 171, Pages 1-172 (July 2017)

This special issue is dedicated to a scientific collaboration between Finland, Estonia and Russia which goes back to the soviet era. Scientists from the countries bordering the Gulf of Finland had initiated this trilateral collaboration to foster coordinated research towards improving the environmental condition of the Gulf. In 2014, the second Gulf of Finland Year was organized, which involved coordinated research cruises, modelling experiments, meetings and other joint

scientific, public and educational activities. In November 2015, results from this collaborative project was presented in Tallinn at the GoF Year Final Scientific Forum. Now, 17 of the presentations have been collected as research papers in this special issue, spanning from nutrient dynamics and catchment processes, biogeochemistry and ecosystem dynamics, organic pollutants, physical oceanography and atmospheric forcing to coastal management. The Gulf of Finland year can serve as a good example of cross-border, bottom-up scientific collaboration, with a positive impact on regional policy and management.

New Baltic Earth Publications...

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