



1st Baltic Earth Conference

Multiple drivers for Earth system changes in the Baltic Sea region

Nida, Lithuania, 13-17 June 2016

Programme Participant List



**KLAIPĖDA
UNIVERSITY**



Baltic Earth
Earth System Science for the Baltic Sea Region

Cover photo: The Great Dune near Nida (Martin Stendel)

Organizers and Sponsors

Klaipėda University, Lithuania



**KLAIPĖDA
UNIVERSITY**

**Helmholtz-Zentrum Geesthacht
Centre for Materials
and Coastal Research, Germany**



**Helmholtz-Zentrum
Geesthacht**

Centre for Materials and Coastal Research

**Swedish Meteorological and
Hydrological Institute
Norrköping, Sweden**

SMHI

Uppsala University, Sweden



**UPPSALA
UNIVERSITET**

**Leibniz Institute for Baltic Sea Research
Warnemünde, Germany**



Week overview

Time	Sun 12 June	Monday 13 June	Tuesday 14 June	Wednesday 15 June	Thursday 16 June	Friday 17 June					
08:00		Registration and Coffee									
08:10											
08:20											
08:30											
08:40											
08:50											
09:00							Opening Ceremony	Topic B Land-sea-atmosphere biogeochemical feedbacks	Topic C Natural hazards and high impact events	Topic E Regional variability of water and energy exchanges	Topic G Multiple and interrelated drivers of environmental changes
09:10											
09:20											
09:30											
09:40											
09:50											
10:00											
10:10											
10:20											
10:30											
10:40											
10:50											
11:00	Keynote Talks	Break	Break	Break	Topic E Discussion	Open Discussion on New Challenges II					
11:10											
11:20											
11:30											
11:40											
11:50											
12:00											
12:10											
12:20											
12:30											
12:40											
12:50											
13:00	Lunch	Topic B Discussion	Lunch	Lunch	Topic F Discussion	Farewell and Airport Shuttle					
13:10											
13:20											
13:30											
13:40											
13:50											
14:00											
14:10											
14:20											
14:30											
14:40											
14:50											
15:00	Topic A Salinity dynamics	Special GEWEX-PannEx	Topic D Sea level dynamics, coastal morphology and erosion	Topic C Discussion	Topic F Regional climate system modeling						
15:10											
15:20											
15:30											
15:40											
15:50											
16:00											
16:10											
16:20											
16:30											
16:40											
16:50											
17:00	Registration	Topic A Salinity dynamics	Poster Session I with Break	Break	Topic G Multiple and interrelated drivers of environmental changes						
17:10											
17:20											
17:30											
17:40											
17:50											
18:00											
18:10											
18:20											
18:30											
18:40											
18:50											
19:00	Ice Breaker with light dinner	Boat Excursion	Topic D Sea level dynamics, coastal morphology and erosion	Topic D Discussion	Poster Session II with Break						
19:10											
19:20											
19:30											
19:40											
19:50											
20:00											
20:10											
20:20											
20:30											
20:40											
20:50											
21:00				Open Discussion on New Challenges I	Topic G Multiple and interrelated drivers of environmental changes						
21:10											
21:20											
21:30											
21:40											
21:50											
Evening Lecture											
Conference Dinner											

Programme

Sunday, 12 June 2016

16:00 – 18:00 Registration

Monday, 13 June 2016

8:00 – 9:50 Registration

Opening ceremony

Welcome on behalf of Baltic Earth

10:00 **H.E. Markus Meier**
Leibnitz Institute for Baltic Sea Research Warnemünde, Germany

Welcome addresses on behalf of the local host

Darius Jasaitis
Mayor of Neringa City, Curonian Spit

Lina Dikšaitė
Vice-Director of Curonian Spit National Park

Saulius Gulbinskas
Vice-Rector of Klaipeda University, Lithuania

Opening session - Keynote speeches

Chair: Anna Rutgersson

- 10:30 **Interrelation of the geosphere, climate processes and the anthroposphere in the Baltic Sea basin during the Holocene**
Jan Harff, H Jöns and A Rosentau
- 11:00 **Agriculture in the Baltic Sea region, major driver and challenges**
Christoph Humborg
- 11:30 **Rehabilitating the Chesapeake Bay (USA) ecosystem under changing climate**
Donald F Boesch, ZP Johnson and M Li
- 12:00 **Two centuries of extreme events over the Baltic Sea and North Sea regions**
Martin Stendel, E van den Besselaar, A Hannachi, J Jaagus, E Kent, E Lefebve, G Rosenhagen, A Rutgersson, F Schenk, G van der Schrier and T Woollings
- 12:30 Lunch**

Topic A: Salinity dynamics

Chair: Andreas Lehmann

- 14:00 **A succession of four Major Baltic Inflows in the period 2014-2016 – an overview of propagation and environmental change (solicited)**
Michael Naumann, G Nausch and V Mohrholz
- 14:30 **The impact of the recent series of barotropic inflows on deep water conditions in the Eastern Gotland Basin – time series observations**
Volker Mohrholz, T Heene, S Beier, G Nausch and M Naumann
- 14:50 **The dynamic of thermohaline regime of the Baltic Sea after “Major Baltic Inflow” 2014**
Sergey Shchuka, D Rak, V Solovyev and A Staskiewicz
- 15:10 **On the role of the haline conditions in the Belt Sea in the formation of highly saline barotropic inflows to the Baltic Sea**
Katharina Höflich, A Lehmann and K Myrberg
- 15:30 Break**

Chair: Kai Myrberg

- 16:00 **Assessment of long time series of atmospheric circulation patterns forcing large volume changes and major inflows to the Baltic Sea (solicited)**
Piia Post and A Lehmann
- 16:30 **Pathways of deep cyclones associated with large volume changes (LVCs) and Major Baltic Inflows (MBIs)**
Andreas Lehmann, K Höflich, P Post and K Myrberg
- 16:50 **Statistics of deep estuarine circulation vs reverse estuarine circulation in the Gulf of Finland**
Madis-Jaak Lilover, J Elken, I Suhhova and T Liblik
- 17:10 **Using shallow-water Argo floats to monitor the Major Baltic Inflows in the Gotland Deep**
Simo Siiriä, L Tuomi, P Roiha, T Purokoski and P Alenius
- 17:30 Topic A Open Discussion
- 17:50 End of scientific programme Day 1
- 19:30 *Ice Breaker with light dinner***

Tuesday, 14 June 2016

Topic B: Land-sea-atmosphere biogeochemical feedbacks

Chair: Karol Kulinski

- 09:00 **Robustness and uncertainty in future nutrient loads from land ecosystems across the Baltic Sea catchment area (solicited)**
Benjamin Smith, M Lindeskog, K Engström, S Olin and A Poska
- 09:30 **Eutrophication assessments using ecosystem model data**
Adolf Stips, D Macia, E Garcia-Gorriz, S Miladinova and T Neumann
- 09:50 **The role of the cyanobacteria life cycle on biogeochemistry of the Baltic Sea - a 3D high resolution coupled physical biogeochemical model study**
Kari Eilola, E Almroth-Rosell, M Gröger, J Hieronymus, B Karlson, Y Liu, S Saraiva, I Wahlström, I Hense and HEM Meier

- 10:10 **Abrupt changes in distribution patterns and dynamics of methane and nitrous oxide in the Central Baltic Sea as a consequence of the 2014-2015 Major Baltic Inflow**
Gregor Rehder, J Werner, G Jakobs, L Umlauf, S Otto and O Schmale
- 10:30 Break**
- Chair: Gregor Rehder*
- 11:00 **Peculiarities of the Baltic Sea acid-base system** (solicited)
Karol Kuliński, B Schneider, B Szymczycha, K Hammer, A Winogradow, M Stokowski and K Koziarowska
- 11:30 **Air-sea CO₂ exchange in the Baltic Sea**
Anna Rutgersson, E Sahlée and G Parard
- 11:50 **Groundwater discharge to the southern Baltic Sea**
Beata Szymczycha and J Pempkowiak
- 12:10 **High-resolution modelling of 3D-hydrodynamics in the Finnish Archipelago Sea**
Elina Miettunen, L Tuomi, J Ropponen and R Lignell
- 12:30 Topic B Open Discussion
- 12:50 Lunch**
- Chair: Marcus Reckermann*
- 13:50 Special GEWEX contribution (solicited)
PannEx: Towards a Regional Hydroclimate Project in the Pannonian Basin
Mónika Lakatos, I Güttler and J Cuxart Rodamilans
- 14:20 **Poster Session I (All topics) with Coffee**
See page 10 of this programme
- 15:40 End of scientific programme Day 2
- 16:00 Boat Excursion on the Curonian Lagoon (end approx. 20:00)**

Wednesday, 15 June 2016

Topic C: Natural hazards and high impact events

Chair: Martin Stendel

09:00 **Changes in the wave climate and severity of storms in the Baltic Sea in 1991 – 2015 from satellite altimetry** (solicited)
Nadia A. Kudryavtseva and T. Soomere

09:30 **Will there be extreme sea ice winters in future?**
Jari Haapala, P. Uotila and BW An

09:50 **Detection of trends in the magnitude of spring floods for the eastern parts of the Gulf of Finland basin**
Sergei Zhuravlev, L. Kurochkina and T. Shalashina

10:10 **Possible consequences of the construction of the NPP "Hanhikivi-1" for the marine environment of the Gulf of Bothnia: model estimates**
Vladimir Ryabchenko, A. Dvornikov, T. Eremina, A. Isaev and S. Martyanov

10:30 Break

Chair: Jari Haapala

11:00 **Meteorological observations of signal stations - a data source for the analysis of extreme weather events?**
Birger Tinz, D. Röhrbein and H. von Storch

11:20 **Assessment of spatial variation of extreme wind speeds**
Ari Venäläinen, P. Pirinen, M. Horttanainen, M. Laapa, R. Hyvönen, I. Lehtonen, P. Junila and H. Peltola

11:40 **Thunderstorm hail and lightning prediction parameters based on dual polarization Doppler weather radar data**
Tanel Voormansik, P. Post, T. Tanilsoo, D. Moisseev and P.J. Rossi

12:00 Topic C Open Discussion

12:20 Lunch

Topic D: Sea level dynamics, coastal morphology and erosion

Chair: Tarmo Soomere

13:50 **Acceleration of mean sea-level rise in the Baltic Sea since 1900** (solicited)
Birgit Hünicke and E Zorita

14:20 **Interrelated drivers of coastline change in the Baltic Sea**
Jan Harff, J Deng, J Dudzinska-Nowak, A Groh, B Hünicke and W Zhang

14:40 **Impacts of regional climate change on the potential longshore sediment transport at the German Baltic Sea coast**
Norman Dreier and P Fröhle

15:00 **Attribution of storm surge events in the southern Baltic Sea to anthropogenic influences**
Katharina Klehmet and B Rockel

15:20 Break

Chair: Ralf Weisse

15:50 **Water level extremes signal changes in the wind direction in the north-eastern Baltic Sea** (solicited)
Tarmo Soomere, M Eelsalu and K Pindsoo

16:20 **Extreme statistics of storm surges in the Baltic Sea**
Evgueni Kulikov and I Medvedev

16:40 **The sea level variability at the southeastern coast of the Baltic Sea: from hours to centuries**
Igor Medvedev, E Kulikov and A Rabinovich

17:00 **Assessment of long-term dynamics of the Curonian Spit foredune in response to hydrometeorological regime change**
Donatas Pupienis, I Buynevich, N Dobrotin, D Jarmalavičius, G Žilinskas, L Jukna, A Cichon-Pupienis

17:20 Topic D Open Discussion

Chair: H.E. Markus Meier

- 17:40 Open Discussion I on New Challenges for Baltic Earth
- 18:10 End of scientific programme Day 3
- 18:30 Evening Lecture
**Connecting Analytical Thinking and Intuition:
Challenges for leadership and education in Earth System Sciences**
Anders Omstedt

Thursday, 16 June 2016

Topic E: **Regional variability of water and energy exchanges**

Chair: Sergey Zhuravlev

- 08:30 **Advanced GNSS tropospheric products for monitoring severe weather events and climate** (*solicited*)
Jonathan Jones, G Guerova, J Dousa, G Dick, S de Haan, E Pottiaux, O Bock and R Pacione
- 09:00 **Changes in UV radiation in Estonia based on measurements and model calculations of UVA and UVB doses since 1955 at Tõravere**
Margit Aun, K Eerme, M Aun and I Ansko
- 09:20 **Multi-annual eddy-covariance measurements of surface energy balance components for urban, agricultural and natural wetland sites in Poland**
Krzysztof Fortuniak, W Pawlak and M Siedlecki
- 09:40 **Projection of climate changes in Belarus according to ensemble models**
Irina Partasenok and B Geyer
- 10:00 **Does soil frost-induced soil moisture precipitation feedback play a role over the Baltic Sea catchment?**
Stefan Hagemann and T Blome
- 10:20 Topic E Open Discussion
- 10:40 Break**

Topic F: Regional climate system modeling

Chair: H.E. Markus Meier

- 11:10 **The North Sea region Climate Change Assessment (NOSCCA):
What happens in the south west of BACC? (solicited)**
Markus Quante, F Colijn and I Nöhren
- 11:40 **On the relevance of higher trophic levels for modelling ecosystem dynamics
in the Baltic Sea**
Ute Daewel and C Schrum
- 12:00 **Arctic region climate teleconnections with Baltic Sea region by NCEP-CFSR
reanalysis**
Erko Jakobson, L Jakobson, P Post and J Jaagus
- 12:20 **Climatic wave modeling in Baltic Proper and Gulf of Riga using SWAN**
Aigars Valainis, U Bethers and J Sennikovs
- 12:40 Topic F Open Discussion
- 13:00 Lunch**
- Chair: Eduardo Zorita*
- 14:30 **6000 years of human-land-sea-interactions: Estimating the impact of land-
use and climate changes on DOC production in the Baltic Sea catchment
(solicited)**
*Anneli Poska, B Pirzamanbin, A Nielsen, H Filipsson, M Lindeskog, B Smith and
D Conley*
- 15:00 **Cluster analysis of contemporary and future climate of Latvia**
Juris Sennikovs, I Klints and U Bethers
- 15:20 **SHEBA – Sustainable shipping and environment of the Baltic Sea**
Jana Moldanova and M Quante
- 15:40 **Deposition of sulfur, nitrogen and particles originating from shipping
activities in the Baltic and North Seas**
Karin Haglund, B Claremar and A Rutgersson
- 16:00 **Poster Session II (All topics) with Coffee**
See page 10 of this programme

Topic G: **Multiple and interrelated drivers of environmental changes**

Chair: Anders Omstedt

- 17:20 **Using integrated modeling to derive the historical water quality in the south-western Baltic Sea**
René Friedland, T Neumann and G Schernewski
- 17:40 **Which factors affect metal and radionuclide pollution in the Baltic Sea?**
Martin Lodenius
- 18:00 **Dialogue- and communication forms as parallel infrastructure of climate- and coastal research at the Southern Baltic Sea coast**
Insa Meinke
- 18:20 **Conceptual challenges of climate servicing**
Hans von Storch
- 18:40 End of scientific programme Day 4
- 19:30** ***Conference Dinner***

Friday, 17 June 2016

Topic G (cont.)

Chair: Benjamin Smith

- 08:30 **Myths of the Baltic Sea eutrophication (solicited)**
Oleg P. Savchuk
- 09:00 **Restoration of the Baltic Proper by decadal oxygenation of the deepwater**
Anders Stigebrandt
- 09:20 Topic G Open Discussion
- Chair: H.E. Markus Meier*
- 09:40 Open Discussion II on New Challenges for Baltic Earth and Farewell
- 10:30** **End of the Conference and Shuttle to Palanga Airport**

Posters

Dedicated poster sessions on Tuesday 14 June and Thursday 16 June in the afternoon.

All posters are on display during the whole conference.

Poster sequence is alphabetically within topics.

Topic A: Salinity dynamics in the Baltic Sea

- A1 **Benthic foraminifera record environmental and climate changes in the Bornholm Basin (Baltic Sea) over the last 6 millennia**
Anna Binczewska, I Polovodova Asteman, M Moros and J Sławińska
- A2 **Marine saline water intrusions and variation in the Curonian Lagoon**
Inga Dailidiene, L Davuliene and V Genyte
- A3 **Tracer studies of water exchange in Gulf of Riga, winter 2015-2016**
Vilnis Frishfelds, U Bethers and J Sennikovs
- A4 **Investigation of properties of inertial waves on the base of long-term ADCP data at moored stations in the Slupsk Furrow and Gdansk Deep**
Maria Golenko, KD Sabinin and D Rak
- A5 **High-resolution view on the subsurface salinity maxima in the Gulf of Riga**
Taavi Liblik, M Skudra and U Lips
- A6 **Salinity oscillations in the range of seasonal variability**
Ekaterina Litina and EA Zakharchuk
- A7 **A high resolution NEMO-Nordic setup for the Gulf of Bothnia**
Semjon Schimanke, R Hordoir, K Eilola and F Frasner
- A8 **Sedimentology and geochemistry of marine deposits from Bornholm and Gdansk Basins - stratigraphical records**
Joanna Slawinska, R Borowka, M Moros, A Binczewska and M Bak

Topic B: Land-Sea-Atmosphere biogeochemical feedbacks

- B1 **Model based inventory of nutrient retention efficiency and coastal filter function along the entire Swedish coast**
Moa Edman, E Almroth-Rosell, K Eilola, J Sahlberg and HEM Meier
- B2 **Large interspecific differences in dissolved organic carbon decomposition from boreal litter sources**
Geert Hensgens, C Arellano, B Smith, A Poska and M Berggren

- B3 **Magnetic susceptibility of the surface layer of bottom sediments of the South Baltic, as a quality parameter in the assessment of selected metals pollution of the marine environment**
Żaneta Kłostowska, L Łęczyński, G Kusza, A Kubowicz-Grajewska, T Ossowski, D Zarzeczkańska, P Hulisz, E Bubliewska
- B4 **Long-term alkalinity trends in the Baltic Sea and their implications for CO₂-induced acidification**
Jens Müller, B Schneider and G Rehder
- B5 **Modelling pelagic carbon and nutrient turnover without bacteria?**
Bärbel Müller-Karulis, J Sundh, C Karlsson, C Humborg and Å Hagström
- B6 **Modelling the contributions to marine acidification from deposited SO_x, NO_x, and NH_x in the Baltic Sea: Past, present and possible future situations**
Anders Omstedt, DR Turner, M Edman, J Gallego-Urrea, B Claremar, I-M Hassellöv and A Rutgersson
- B7 **Riverine carbon export and its impacts on Finnish coastal water quality**
Antti Räike, V Fleming-Lehtinen, P Kortelainen, T Mattsson, P Kauppila and D Thomas
- B8 **Large-scale, high resolution land-use based hydrological model for the territory of Lithuania**
Juris Sennikovs, U Bethers, S Plunge and P Bethers
- B9 **Carbon-based nutrient cycling modeling of the Baltic Sea: Analysis of twelve basins using three-dimensional flow dynamics for period 2001-2009**
Guillaume Vigouroux, V Cvetkovic and A Jönsson
- B10 **Changes of sedimentary organic matter en route from source to sink areas in the Southern Baltic**
Aleksandra Winogradow and J Pempkowiak
- B11 **High nitrite concentration inhibits nitrite-adapted granular anammox biomass less compared to biofilm**
Ivar Zekker, M Raudkivi, E Rikmann, P Vabamäe, K Kroon and T Tenno

Topic C: Natural hazards and high impact events

- C1 **Relationships of cloud-to-ground lightning with circulation weather types over Estonia 2005–2014**
Regina Alber, P Post and M Sepp
- C2 **HOAPS water vapour characteristic during storms and heavy precipitation events over SE Baltic Sea region**
Agne Djačenko and G Stankūnavičius

- C3 **netBaltic – a heterogeneous wireless communications system over the Baltic Sea**
Michal Hoeft, K Gierlowski, J Wozniak, A Przyborska, M Białoskórski, B Pliszka, M Wichorowski, M Zwierz and J Jakacki
- C4 **Numerical modelling of convective snow bands in the Baltic Sea area using atmosphere-ocean-wave coupled model systems**
Julia Jeworrek , Wu L and A Rutgersson
- C5 **Return period of Estonian precipitation extremes**
Jüri Kamenik
- C6 **Summertime thunderstorms prediction in Belarus**
Palina Lapo, Y Sokolovskaya, A Krasouski, A Svetashev, L Turishev and S Barodka
- C7 **Drought monitoring in Lithuania using NDVI**
Viktorija Mačiulytė and E Rimkus
- C8 **The special features of the wind waves in the Baltic Sea following the results of numerical modelling**
Alisa Medvedeva, V Arkhipkin and S Myslenkov
- C9 **Heat waves in Belarus**
Viktar Melnik and YA Sokolovskaya
- C10 **Main trends of climate changes and severe weather activity for last decades across the territory of the Republic of Belarus**
Viktar Melnik and E Komarovskaya
- C11 **The new established Expertennetzwerk: The focus-region “Südwestliches Schleswig-Holstein” and a case study to long-term changes in the intensity of extreme water levels**
Jens Möller and H Heinrich
- C12 **Projected lengthening of spring cereals growing season in Estonia and accompanying high impact events of elevated temperatures**
Triin Saue, L Jauhiainen, J Kadaja and P Peltonen-Sainio
- C13 **Analysis of severe weather using WRF model**
Virmantas Šmatas and G Stankūnavičius
- C14 **Extreme weather condition of the northern-eastern part of Poland and their relationship with atmospheric oscillation**
Zbigniew Szwejkowski, E Dragańska, I Cymes and S Suchecki

C15 **Change of extreme floods parameters in the Nemunas River lower reaches and delta**
Gintaras Valiuškevičius, G Stankūnavičius, E Stonevičius and J Brastovickytė

C16 **Drivers of precipitation extremes in different spatial and temporal scales**
Joanna Wibig and P Piotrowski

Topic D: **Sea level dynamics, coastal morphology and erosion**

D1 **Investigating sediment resuspension using combined optical and acoustic methods**
Fred Buschmann, A Erm, J Rebane and M Listak

D2 **Intensity of Eolian processes on Lithuanian part of Curonian Spit**
Algimantas Česnulevičius, A Baurėnas, L Bevainis, R Morkūnaitė and D Ovodas

D3 **A model for simulating extreme sea levels in the Baltic Sea**
Christian Dieterich, M Gröger, H Andersson, S Nerheim and A Jönsson

D4 **Rapid changes in sea level**
Jürgen Holfort, I Perlet and I Stanislawczyk

D5 **Spatial variation of statistical properties of extreme water levels along the eastern Baltic Sea coast**
Katri Pindsoo, M Eelsalu and T Soomere

D6 **Determining the combined probability of occurrence of storm surge hydrographs and extreme sea state conditions**
Dörte Salecker, A Gruhn and P Fröhle

D7 **Simulating sea level variations in the Baltic Sea using regional climate scenarios**
Jani Särkkä, K Kahma, M Kämäräinen and M Johansson

Topic E: **Regional variability of water and energy exchanges**

E1 **Numerical simulation of hydrodynamic process at Oskarshamn harbor—coupling model with Baltic Sea**
Yuanying Chen and V Cvetkovic

E2 **Regime shift in winter climatic conditions and river runoff in Estonia since the winter 1988/89**
Jaak Jaagus and M Sepp

- E3 **Detection of cold and warm anomalies: The example of Estonia**
Sirje Keevallik
- E4 **Luninsky swampland water-level regime**
Alena Kvach and L Zhurovovich
- E5 **Sea-lagoon interaction during upwelling processes in the SE Baltic Sea**
Toma Mingelaite, I Dailidienė and I Kozlov
- E6 **The ice seasons severity by the ice extents sum on the Baltic Sea during 1982-2015**
Ove Pärn and J Rjazin
- E7 **The spatio-temporal changes of ice regime in the Baltic Sea basin rivers in the Republic of Belarus in a period of global warming**
Ala Pauros
- E8 **Precipitation in coastal area of Poland**
Piotr Piotrowski, J Jędruszkiewicz and M Zieliński
- E9 **The BALTEX Box revisited: The energy budget of the Baltic Sea in the coupled regional climate model REMO-BSIOM**
Thomas Raub, K Getzlaff, D Jacob and A Lehmann
- E10 **Relationship between air temperature and sea water temperature in the different depths of SE Baltic Sea**
Viktorija Rukšėnienė, I Dailidienė and L Kelpšaitė-Rimkienė
- E11 **Changes in the life cycle characteristics of cyclones entering the Baltic Sea Region**
Mait Sepp, P Post, K Mändla and R Aunap
- E12 **Water level changes of the Emajõgi and the Neman rivers in the vegetation period**
Mait Sepp and A Järvet

Topic F: **Regional climate system modeling**

- F1 **The temporal and spatial distribution during the cool episode about 8.2 ka ago in the Baltic Sea basin and surrounding areas**
Irena Borzenkova, O Borisova and T Sapelko
- F2 **Validity of pattern scaling investigated with a multi-model RCM ensemble over Europe**
Ole B. Christensen, S Yang, F Boberg, C Fox Maule, P Thejll, M Olesen, M Drews, JD Sørup and J-H Christensen

- F3 **NEMO-Nordic-SCOB1: A new biogeochemistry model for the North Sea and Baltic Sea**
Matthias Gröger, E Almroth-Rosell, H Andersson, K Eilola, S Falahat, F Frasnier, R Hordoir, A Höglund, J Hyronimus, I Kuznetzov, HEM Meier and S Saraiva
- F4 **A potential remote impact of air-sea coupling over the North and Baltic Sea on precipitation simulated over Central Europe**
Ha T.M. Ho-Hagemann, M Gröger, B Rockel, M Zahn, B Geyer and HEM Meier
- F5 **Hydrothermal conditions in Poland until year 2060 and selected climate change scenarios**
Leszek Kuchar, S Iwański, E Gasiorek and E Diakowska
- F6 **Evaluation of the coupled COSMO-CLM+NEMO-Nordic model with focus on North and Baltic Seas**
Jennifer Lenhardt, J Brauch, B Früh and T van Pham
- F7 **Estimating uncertainties in projections for the Baltic Sea region based upon an ensemble of regional climate system models**
H. E. Markus Meier, M Edman and members of the Baltic Earth working group on Scenario simulations for the Baltic Sea 1960-2100
- F8 **Comparison of Observed and Modelled Radiative Energy Flows**
Ehrhard Raschke and S Kinne
- F9 **An extended North- and Baltic Sea climatology (NBSC) of atmospheric and hydrographic in-situ data**
Nils H Schade, R Sadikni, A Jahnke-Bornemann and I. Hinrichs
- F10 **The future climate regions in Estonia**
Mait Sepp, T Tamm and V Sagris
- F11 **Daily temperature and precipitation extremes in the Baltic Sea region derived from the BaltAn65+ reanalysis and EOBS database**
Velle Toll and P Post

Topic G: Multiple and interrelated drivers of environmental changes

- G1 **The impact of the urban surface runoff on the receiving river: the case study of Brest, Belarus**
Ina Bulskaya, A Kolbas, D Dyliuk and A Kuuzmitsky
- G2 **Curonian Lagoon bathing water quality assessment through microbial pollution modeling**
Natalja Čerkasova, M Kataržytė, G Umgiesser and E Baltranaitė

- G3 **Coastal resources understanding and local governance development: socio-ecological system and indicators prerequisite**
Raimonds Ernsteins, E Lagzdina, J Lapinskis, A Lontone, J Kaulins and I Kudrenickis
- G4 **The impact of wrecks on the geochemical properties of the surface layer of marine bottom sediments in wrecks deposition areas: The example of ORP Wicher**
Tomasz Figiel, P Wysocki, Z Kłostowska, L Łęczyński, T Ossowski, D Zarzeczkańska and M Figurski
- G5 **Changes of the Baltic Sea coastal urban region (with example of Klaipeda settlement)**
Jelena Galiniene, D Verkuleviciute and S Gadal
- G6 **Analysis of the spread of chemical munitions dumped in the Baltic Sea**
Jaromir Jakacki, A Przyborska, M Białoskórski and B Pliszka
- G7 **On some hydrometeorological monitoring results in the south-eastern part of the Baltic sea during the last decade**
Mariya Kapustina, T Bukanova and Z Stont
- G8 **Future projections of pine growth dynamics at peat and mineral soils in Lithuania**
Egedijus Rimkus, J Kažys, J Edvardsson, R Pukiene, C Corona, R Linkevičienė and M Stoffel
- G9 **Climate change effect on snow climate in Neman basin**
Edvinas Stonevicius, E Rimkus, A Staras and G Valiuskevicius
- G10 **Psychophysical aesthetic ranking of coastal landscapes: A case study of the Curonian Spit (Lithuania)**
Arvydas Urbis and R Povilanskas
- G11 **Management of reclaimed coastal areas: The case of the new Bronka port in the Neva Bay**
Vladimir Zhigulski, M Shilin and AYershova

List of Participants

Regina Alber	University of Tartu, Department of Geography, Estonia regina.alber@ut.ee
Margit Aun	University of Tartu, Institute of Physics, Estonia margit.aun@ut.ee
Uldis Bethers	University of Latvia, Faculty of Physics and Mathematics, Latvia bethers@latnet.lv
Sabine Billerbeck	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany sabine.billerbeck@hzg.de
Anna Binczewska	University of Szczecin, Faculty of Geosciences, Poland anna.binczewska@gmail.com
Olivier Bock	IGN - Univ Paris Diderot, LAREG, France Olivier.Bock@ign.fr
Donald Boesch	University of Maryland, Center for Environmental Sciences, USA boesch@umces.edu
Arunas Bukantis	Vilnius University, Department of Hydrology and Climatology, Lithuania arunas.bukantis@gf.vu.lt
Ina Bulskaya	Brest State University named after A.S.Pushkin, Republic of Belarus inabulskaya@gmail.com
Fred Buschmann	Tallinn University of Technology, Marine Systems Institute, Estonia fred.buschmann@msi.ttu.ee
Yuanying Chen	Royal Institute of Technology, Division of Land and Water Resources, Sweden yuanying@kth.se
Natalja Čerkasova	Klaipeda University, Natural Sciences, Lithuania natalja.cerkasova@gmail.com
Ute Daewel	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany ute.daewel@hzg.de
Inga Dailidienė	Klaipeda University, Geophysical Science Department, Lithuania inga.dailidienė@ku.lt
Lina Davulienė	Klaipeda University, Natural Sciences, Lithuania lina.davulienė@ftmc.lt
Agnė Djačenko	Vilnius University, Department of Hydrology and Climatology, Lithuania agne.djacenko@gmail.com

Norman Dreier	Hamburg University of Technology, River and Coastal Engineering, Germany norman.dreier@tuhh.de
Moa Edman	Swedish Meteorological and Hydrological Institute, Sweden moa.edman@smhi.se
Kari Eilola	Swedish Meteorological and Hydrological Institute, Sweden kari.eilola@smhi.se
Raimonds Ernsteins	University of Latvia, Faculty of Geography and Earth, Latvia raimonds.ernsteins@lu.lv
Tomasz Figiel	University of Gdańsk, Institute of Oceanography, Poland s213339@stud.ug.edu.pl
Krzysztof Fortuniak	University of Łódź, Meteorology and Climatology, Poland kfortun@uni.lodz.pl
René Friedland	Leibniz Institute for Baltic Sea Research Warnemünde, Germany rene.friedland@io-warnemuende.de
Vilnis Frishfelds	University of Latvia, Faculty of Physics and Mathematics, Latvia frishfelds@latnet.lv
Jelena Galiniene	Klaipeda University, Natural Sciences, Lithuania elenasynanovic@gmail.com
Matthias Gröger	Swedish Meteorological and Hydrological Institute, Sweden matthias.groger@smhi.se
Jari Haapala	Finnish Meteorological Institute, Finland Jari.haapala@fmi.fi
Stefan Hagemann	Max-Planck-Institute for Meteorology, Hamburg Germany stefan.hagemann@zmaw.de
Ha T. M. Hagemann	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany ha.hagemann@hzg.de
Karin Haglund	Uppsala University, Earth Sciences, Sweden karin_tuve@hotmail.com
Jan Harff	Leibniz Institute for Baltic Sea Research Warnemünde, Germany jan.harff@io-warnemuende.de
Sabine Hartmann	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany sabine.hartmann@hzg.de
Geert Hensgens	Lund University, Physical Geography and Ecosystem, Sweden geert.hensgens@nateko.lu.se
Katharina Höflich	GEOMAR, Helmholtz-Zentrum für Ozeanforschung Kiel, Germany khoeflich@geomar.de

Jürgen Holfort	Federal Maritime and Hydrographic Agency of Germany (BSH), Germany juergen.holfort@bsh.de
Christoph Humborg	Stockholm University, Baltic Sea Centre, Sweden christoph.humborg@su.se
Hans-Jörg Isemer	International Baltic Earth Secretariat, Helmholtz-Zentrum Geesthacht, Germany, hans-joerg.isemer@hzg.de
Jaak Jaagus	University of Tartu, Institute of Ecology and Earth Sciences, Estonia jaak.jaagus@ut.ee
Jaromir Jakacki	Polish Academy of Sciences, Institute of Oceanology, Poland jjakacki@iopan.gda.pl
Erko Jakobson	University of Tartu, Department of Remote Sensing, Estonia erko.jakobson@ut.ee
Joanna Jędruszkiewicz	University of Łódź, Department of Meteorology and Climatology, Poland jjedruszkiewicz@gmail.com
Julia Jeworrek	Uppsala University, Earth Sciences, Sweden julia.jeworrek@yahoo.de
Alena Kamarovskaya	Center of Hydrometeorology and Control of Radioactive Contamination and Environmental Monitoring of the Republic of Belarus, Belarus clim@by.mecom.ru
Jüri Kamenik	University of Tartu, Institute of Geography, Estonia kamenikmeister@gmail.com
Mariya Kapustina	P.P. Shirshov Institute, Institute of Oceanology, Russia kapustina.mariya@yandex.ru
Ekatarina Kasilova	Moscow Power Engineering Institute, Global Energy Problems Laboratory, Russia, e.v.kasilova@gmail.com
Justas Kažys	Vilnius University, Department of Hydrology and Climatology, Lithuania justas.kazys@gf.vu.lt
Sirje Keevallik	Tallinn University of Technology, Marine Systems Institute, Estonia sirje.keevallik@gmail.com
Katharina Klehmet	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany katharina.klehmet@hzg.de
Żaneta Kłostowska	University of Gdańsk, Institute of Oceanography, Poland zaneta.klostowska@phdstud.ug.edu.pl
Madline Kniebusch	Leibniz Institute for Baltic Sea Research Warnemünde, Germany madline.kniebusch@io-warnemuende.de

Silke Köppen	International Baltic Earth Secretariat, Helmholtz-Zentrum Geesthacht, Germany, silke.koepfen@hzg.de
Mariliis Kõuts	Tallinn University of Technology, Marine Systems Institute, Estonia mariliis.kouts@msi.ttu.ee
Leszek Kuchar	Wroclaw University of Environmental and Life Sciences, Poland, leszek.kuchar@gmail.com
Nadia Kudryavtseva	Tallinn University of Technology, Marine Systems Institute, Estonia nadia@ioc.ee
Evgueni Kulikov	P.P. Shirshov Institute, Institute of Oceanology, Russia kulikove@gmail.com
Karol Kuliński	Polish Academy of Sciences, Institute of Oceanology, Poland kroll@iopan.gda.pl
Alena Kvach	Center of Hydrometeorology and Control of Radioactive Contamination and Environmental Monitoring of the Republic of Belarus, Belarus gid2@hmc.by
Monika Lakatos	Hungarian Meteorological Service, Climate Division, Hungary lakatos.m@met.hu
Andreas Lehmann	GEOMAR Helmholtz-Zentrum für Ozeanforschung Kiel, Germany alehmann@geomar.de
Jennifer Lenhardt	Deutscher Wetterdienst, Climate and Environment Consultancy, Germany jennifer.lenhardt@dwd.de
Taavi Liblik	Tallinn University of Technology, Marine Systems Institute, Estonia taavi.liblik@msi.ttu.ee
Madis-Jaak Lilover	Tallinn University of Technology, Marine Systems Institute, Estonia madis-jaak.lilover@msi.ttu.ee
Ekaterina Litina	State Oceanographic Institute, St. Petersburg Branch, Russia warzuga@yandex.ru
Martin Lodenius	University of Helsinki, Environmental Sciences, Finland martin.lodenius@helsinki.fi
Viktorija Mačiulytė	Vilnius University, Department of Hydrology and Climatology, Lithuania viktorija.maciulyte@gf.vu.lt
Igor Medvedev	P.P. Shirshov Institute, Institute of Oceanology, Russia medvedev@ocean.ru
Alisa Medvedeva	P.P. Shirshov Institute, Institute of Oceanology, Russia alisa.bannikova@gmail.com

H.E. Markus Meier	Leibniz Institute for Baltic Sea Research Warnemünde, Germany and Swedish Meteorological and Hydrological Institute, Sweden markus.meier@io-warnemuende.se
Insa Meinke	Northern German Climate Office, Helmholtz-Zentrum Geesthacht, Germany insa.meinke@hzg.de
Viktar Melnik	Center of Hydrometeorology and Control of Radioactive Contamination and Environmental Monitoring of the Republic of Belarus, Belarus mel@hmc.by
Elina Miettunen	Finnish Environment Institute SYKE, Finland elina.miettunen@ymparisto.fi
Jens Möller	Federal Maritime and Hydrographic Agency of Germany (BSH), Germany jens.moeller@bsh.de
Volker Mohrholz	Leibniz Institute for Baltic Sea Research Warnemünde, Germany volker.mohrholz@io-warnemuende.de
Jana Moldanová	IVL Swedish Environmental Research Institute, Sweden janam@ivl.se
Regina Morkunaite	Nature Research Center, Laboratory for Quaternary Research, Lithuania morkunaite@geo.lt
Jens Müller	Leibniz Institute for Baltic Sea Research Warnemünde, Germany Jens.Mueller@io-warnemuende.de
Bärbel Müller-Karulis	Stockholm University, Baltic Sea Centre, Sweden barbel.muller-karulis@su.se
Kai Myrberg	Finnish Environment Institute, SYKE, Finland kai.myrberg@ymparisto.fi
Michael Naumann	Leibniz Institute for Baltic Sea Research Warnemünde, Germany michael.naumann@io-warnemuende.de
Thomas Neumann	Leibniz Institute for Baltic Sea Research Warnemünde, Germany thomas.neumann@io-warnemuende.de
Anders Omstedt	University of Gothenburg, Marine Sciences, Sweden anders.omstedt@marine.gu.se
Irina Partasenok	Center of Hydrometeorology and Control of Radioactive Contamination and Environmental Monitoring of the Republic of Belarus, Belarus irina-danilovich@yandex.ru
Ala Pauros	Center of Hydrometeorology and Control of Radioactive Contamination and Environmental Monitoring of the Republic of Belarus, Belarus alla_gidr@mail.ru

Włodzimierz Pawlak University of Łódź, Meteorology and Climatology, Poland
wpawlak@uni.lodz.pl

Katri Pindsoo Tallinn University of Technology, Institute of Cybernetics, Estonia
Katri.Pindsoo@gmail.com

Piotr Piotrowski University of Łódź, Meteorology and Climatology; Poland
janos33@wp.pl

Anneli Poska Lund University, Physical Geography and Ecosystem Analysis, Sweden
anneli.poska@nateko.lu.se

Piia Post University of Tartu, Institute of Physics, Estonia
piia.post@ut.ee

Diego Fernández Prieto EO Science, Applications and Future Technologies Department
European Space Agency (ESA), Italy
Diego.Fernandez@esa.int

Donatas Pupienis Vilnius University, Department of Hydrology and Climatology, Lithuania
donatas.pupienis@gf.vu.lt

Markus Quante Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany
markus.quante@hzg.de

Antti Räike Finnish Environment Institute, SYKE, Finland
antti.raike@ymparisto.fi

Ehrhard Raschke University of Hamburg, Meteorological Institute, Germany
DrRaschke@aol.com

Thomas Raub Climate Service Center Germany GERICS, Helmholtz-Zentrum Geesthacht,
Germany, thomas.raub@hzg.de

Marcus Reckermann International Baltic Earth Secretariat, Helmholtz-Zentrum Geesthacht,
Germany, marcus.reckermann@hzg.de

Gregor Rehder Leibniz Institute for Baltic Sea Research Warnemünde, Germany
gregor.rehder@io-warnemuende.de

Egidijus Rimkus Vilnius University, Department of Hydrology and Climatology, Lithuania
egidijus.rimkus@gf.vu.lt

Alar Rosentau University of Tartu, Department of Geology, Estonia
alar.rosentau@ut.ee

Viktorija Rukšėnienė Klaipėda University, Natural Sciences, Lithuania
viktorija.rukseniene@gmail.com

Anna Rutgersson Uppsala University, Department of Earth Sciences, Sweden
anna.rutgersson@met.uu.se

Vladimir Ryabchenko	P.P. Shirshov Institute, Institute of Oceanology, Russia vla-ryabchenko@yandex.ru
Jani Särkkä	Finnish Meteorological Institute, Marine Research, Finland Jani.Sarkka@fmi.fi
Dörte Salecker	Hamburg University of Technology, River and Coastal Engineering, Germany doerte.salecker@tuhh.de
Triin Saue	Tallinn University of Technology, Estonian Crop Research Institute, Estonia triin.saue@etki.ee
Oleg Savchuk	Stockholm University, Baltic Sea Centre, Sweden oleg.savchuk@su.se
Nils Schade	Federal Maritime and Hydrographic Agency of Germany (BSH), Germany nils.schade@bsh.de
Semjon Schimanke	Swedish Meteorological and Hydrological Institute, Sweden semjon.schimanke@smhi.se
Corinna Schrum	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany corinna.schrump@hzg.de
Juris Sennikovs	University of Latvia, Faculty of Physics and Mathematics, Latvia jsenniko@latnet.lv
Mait Sepp	University of Tartu, Department of Geography, Estonia mait.sepp@ut.ee
Sergey Shchuka	P.P. Shirshov Institute, Institute of Oceanology, Russia s_shchuka@mail.ru
Mikhail Shilin	Russian State Hydrometeorological University, St. Petersburg, Russia shilin@rshu.ru
Simo-Matti Siiriä	Finnish Meteorological Institute, Marine Research, Finland simo-matti.siiria@fmi.fi
Maris Skudra	Tallinn University of Technology, Marine Systems Institute, Estonia maris.skudra@msi.ttu.ee
Joanna Sławińska	University of Szczecin, Faculty of Geosciences, Poland joanna.slawinska@univ.szczecin.pl
Virmantas Šmatas	Vilnius University, Faculty of Natural Sciences, Lithuania virmantas.smatas@gf.stud.vu.lt
Benjamin Smith	Lund University, Physical Geography and Ecosystems Analysis, Sweden ben.smith.lu@gmail.com
Tarmo Soomere	Tallinn University of Technology, Institute of Cybernetics, Estonia soomere@cs.ioc.ee

Gintautas Stankūnavičius	Vilnius University, Department of Hydrology and Climatology, Lithuania, gintas.stankunavicius@gf.vu.lt
Antoni Staśkiewicz	Maritime Institute, Department of Operational Oceanography, Poland anstas@im.gda.pl
Martin Stendel	Danish Meteorological Institute, Climate and Arctic, Denmark mas@dmi.dk
Anders Stigebrandt	University of Gothenburg, Marine Sciences, Sweden anders.stigebrandt@marine.gu.se
Adolf Stips	EC Joint Research Centre, Institute for Environment and Sustainability, Italy adolf.stips@jrc.ec.europa.eu
Marcin Stokowski	Polish Academy of Sciences, Institute of Oceanology, Poland stokowski@iopan.pl
Edvinas Stonevičius	Vilnius University, Department of Hydrology and Climatology, Lithuania edvinas.stonevicius@gf.vu.lt
Zbigniew Szwejkowski	University of Warmia and Mazury in Olsztyn, Poland szwzbig@uwm.edu.pl
Beata Szymczycha	Polish Academy of Sciences, Institute of Oceanology, Poland beat.sz@iopan.gda.pl
Birger Tinz	Deutscher Wetterdienst, Climate Monitoring, Germany birger.tinz@dwd.de
Velle Toll	University of Tartu, Institute of Physics, Estonia velle.toll@ut.ee
Arvydas Urbis	Klaipeda University, Faculty of Marine Technology and Natural Sciences, Lithuania, arvydasurbisku@gmail.com
Gintaras Valiuškevičius	Vilnius University, Department of Hydrology and Climatology, Lithuania gintaras.valiuskevicius@gf.vu.lt
Ari Venäläinen	Finnish Meteorological Institute, Climate Service Centre, Finland ari.venalainen@fmi.fi
Guillaume Vigouroux	Royal Institute of Technology, Land and Water Engineering, Sweden gvig@kth.se
Hans von Storch	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany hvonstorch@web.de
Tanel Voormansik	University of Tartu, Institute of Physics, Estonia tanel.voormansik@ut.ee
Ralf Weisse	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany ralf.weisse@hzg.de

Aleksandra Windogradow	Polish Academy of Sciences, Institute of Oceanology, Poland olcia@iopan.gda.pl
Ivar Zekker	University of Tartu, Institute of Chemistry, Estonia Ivar.Zekker@gmail.com
Vladimir Zhigulski	Eco-Express-Service Ltd., St. Petersburg, Russia dir@ecoexp.ru
Sergei Zhuravlev	Saint-Petersburg State University, State Hydrology Institute, Russia s.zhuravlev@spbu.ru
Eduardo Zorita	Institute of Coastal Research, Helmholtz-Zentrum Geesthacht, Germany eduardo.zorita@hzg.de

