



2nd International Conference on
**Climate Change - The environmental and socio-economic response
in the Southern Baltic region**

Szczecin, Poland, 12-15 May 2014

Programme and
Participant List



Baltic Earth
Earth System Science for the Baltic Sea Region

Organized and sponsored by



University of Szczecin



Baltic Earth

Earth System Science for the Baltic Sea Region

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POLISH ACADEMY of SCIENCES

**2nd International Conference on Climate Change -
The environmental and socio-economic response in the Southern Baltic region, Szczecin, Poland, 12-15 May 2014
Programme Overview**

Sunday	Monday	Tuesday	Wednesday	Thursday
	Registration 9:00 to 10:45	Session D Break: 10:30-11:00	Session E Break: 10:30-11:00	All day Excursions
	Opening Ceremony and Opening Lectures	Poster Session I	Session E	
	Lunch: 12:30-14:00	Lunch: 13:00-14:00	Lunch: 12:00-13:00	
	Session A	Session D	Copernicus Symposium	
	Break: 15:50-16:20	Break: 15:30-16:00	Break: 14:30-15:00	
Registration 16:00 to 20:00	Session C	Session D	Final Discussion and concluding remarks	
	End: 17:50	End: 17:00	End: 16:00	
Ice Breaker 19:00	Evening Lecture 19:30	Conference Dinner 19:30		

Sessions

- A Reconstructions of palaeo-environmental change: Geological proxies and numerical modelling
- B Modelling of climate change: How reliable are future projections? (only poster presentations)
- C Natural dynamics of the coastal zone and the socio-economic response from prehistoric to recent times
- D Climate change and regional planning
- E Changing Baltic Sea coasts and their sustainable protection

Draft Programme

(as of 16 April 2014, minor changes possible)

SUNDAY, 11 May 2014

16:00 - 20:00 **Registration** at the Conference Venue

19:00 **Ice Breaker** at the Conference Venue (Drinks/Snacks/Music)

MONDAY, 12 May 2014

09:00 - 10:15 **Registration** at the Conference Venue

10:30 **Opening Ceremony**

Chair: Andrzej Witkowski

Inaugural addresses

Olgierd Geblewicz, Marshal of the Province of Western Pomerania

Piotr Krzystek, Mayor of the City of Szczecin

Artu Bejger, Rector of the Szczecin Maritime Academy

Edward Włodarczyk, Rector of the University of Szczecin

Opening Lectures

11:30 **Late Pleistocene climate change and its impact on palaeogeography of the southern Baltic Sea region**

Leszek Marks, University of Warsaw, Department of Climate Geology and Polish Geological Institute – National Research Institute, Warsaw

12:00 **Copernicus dilemma and contemporary science**

Karol Piasecki, University of Szczecin, Faculty of Humanities

12:30 **Lunch**

Session A: Reconstructions of palaeo-environmental change:
Geological proxies and numerical modelling



Chair: Aarno Kotilainen

- 14:00 *Keynote Lecture*
Linking terrestrial and marine ecosystems: Holocene land-cover changes and their effect on terrestrial carbon pools and coastal ecosystems along the Swedish Baltic coast
Anneli Poska, Nielsen A.B., Björk S., Broström A., Filipsson H.L., Ghosh A., Khan M., Ning W., Åkesson C., Conley D.J.
- 14:30 **Disentangling influences on varve preservation in a 1200-year record of partially varved sediments from Lake Tiefer See (NE Germany) – A multi-proxy approach**
Nadine Dräger, Theuerkauf M., Hübener T., Wulf S., Kienel U., Slowinski M., Plessen B., Dulski P., Schedel R., Ott F., Lorenz S., Brauer A.
- 14:50 **Paleogeographic investigations in the Kaliningrad region, Russia**
Yuriy Kublitskiy, Subetto D., Arslanov K., Druzinina O., Skhodnov I.
- 15:10 **The development of lake sedimentation since Older Dryas in Belarus**
Aliaksei Novik
- 15:30 **Late Glacial to Holocene environmental changes with special reference to salinity reconstructed from shallow water lagoon sediments of the southern Baltic Sea coast**
Sławomir Dobosz, Seddon A., Witkowski A., Kierzek A., Cedro B.
- 15:50 **Break**

Session C: Natural dynamics of the coastal zone and the socio-economic response from prehistoric to recent times



Chair: Marek Dutkowski

- 16:20 *Keynote Lecture*
Simulation of the historical ecosystem state as a reference according to the Water Framework Directive
Rene Friedland, Schernewski G., Neumann T.

- 16:50 **The dynamics of the coastline of the Eastern Gulf of Finland: the natural processes and human activities on the natural disasters prevention**
Petr Leontev
- 17:10 **Determination of the snow melting intensity in nowadays climate conditions by example of the Neman river basin**
Alexander Volchak, Kostiuk D., Petrov D., Sheshko N.
- 17:30 **A comparison of selected River-mouth systems – zones of interference between terrestrial, marine and anthropogenic impacts**
Jan Harff, Deng J., Osadczuk A., Tang C., Witkowski A., Wu J., Xia Z.
- 17:50 Closing for the day
- 19:30 *Evening Lecture*
"Energiewende" in Germany - Issues and problems
Friedrich Wagner, Max-Planck Institut für Plasmaphysik, Greifswald

TUESDAY, 13 May 2014

Session D: Climate change and regional planning



Chair: Hans von Storch

- 9:00 *Keynote Lecture*
Effects of climate change on atmospheric nitrogen deposition to the Baltic Sea
Jerzy Bartnicki, Simpson D.
- 9:30 **Future Wave Climate Projections at the German Baltic Sea Coast on the Basis of the Regional Climate Model Cosmo-CLM**
Norman Dreier, Schlamkow C., Fröhle P., Salecker D.
- 9:50 **Comparison of the December 2013 storm surge with long-term severe storm events at the Pomeranian Bay coast (the southern Baltic Sea)**
Halina Kowalewska-Kalkowska, Marks R.
- 10:10 **Influence of climate change on urban surface runoff pollution in the city of Brest, Belarus**
Ina Bulskaya, Volchek A.

10:30 **Break**

Chair: Marcus Reckermann

11:00 **Oral poster presentations**
1 slide, max. 1 min per poster

11:45 **Poster session**
See the poster programme on pages 7-10

13:00 **Lunch**

Session D cont. Climate change and regional planning



Chair: Jacek Batog

14:00 Keynote Lecture
How reliable are selected methods of projections of future thermal conditions? A case from Poland
Joanna Wibig

14:30 **Application of hydrodynamic model of the Baltic Sea to the December 2013 storm surge representation along the Polish Baltic coast**
Halina Kowalewska-Kalkowska, Kowalewski M.

14:50 **Frequencies of cyclones with different origin within the territory of Belarus and their impact to hydrometeorological conditions**
Irina Partasenok, Melnik V., Chekan R.

15:10 **Influence of climate change on water resources in Belarus**
Alexander Volchak, Parfomuk S.

15:30 **Break**

16:00 **The violent mid latitude storm hitting Northern Germany and Denmark, 26 October 2013**
Hans von Storch, Feser F., Lefebvre C., Stendel M.

16:20 **Interrelation between the North Atlantic Oscillation (NAO) and the Discharges of 50 Rivers Located at the Baltic Sea Drainage Basin: A Statistical Sensing Analysis**
Ali B.Mahmood, Marks R.

16:40 **Effects of land management regulations and measures on nitrogen leaching in the German Baltic Sea catchment**
A. Wagner, Heidecke C., Kreins P., Venohr M.

17:00 Closing for the day

19:30 Conference Dinner

WEDNESDAY, 14 May 2014

Session E: Changing Baltic Sea coasts and their sustainable protection



Chair: Zygmunt Meyer

9:00 *Keynote Lecture*
Effectiveness of Coastal and Flood Protection Structures in a Changing Climate
Peter Fröhle

9:30 **Effect of climate change on ice regime of lagoons of the southern and eastern Baltic Sea**
Inga Dailidienė, Baudler H., Rukšėnienė V.

9:50 **A method for estimating coastline recession due to sea level rise by assuming stationary wind-wave climate**
Junjie Deng, Harff J., Schimanke S., Meier H.E.M.

10:10 **Extreme short-term aeolian accumulation on foredunes of west Polish coast caused by hurricane Xavier on December 2013**
Tomasz Łabuz

10:30 Break

Chair: Peter Fröhle

11:00 **Highly persisting patch formation areas in the Gulf of Finland, the Baltic Sea**
Andrea Giudici, Soomere T.

11:20 **Subaerial beach volume change and sea level rise on decadal time scale in the Lithuanian coasts of the Baltic Sea**
Darius Jarmalavičius, Kriaučiūnienė J., Žilinskas G., Pupienis D.

11:40 **On spatio-temporal variations of the wave energy potential along the eastern Baltic Sea coast**
Maris Eelsalu, Soomere T.

12:00 Lunch

Copernicus Symposium



Chair: Jan Harff

13:00 **Nicolaus Copernicus – 500 years of experimental science**
Roman Marks, Szczecin University, Poland

13:30 **Was uns der Augenschein, die Physik und die Bibel lehren - Ein Plädoyer für das geozentrische Weltbild**
What intuition, physics and the bible tell us – A plea for the geocentric world view (lecture given in German)
Jürgen Hamel, Archenhold-Sternwarte, Berlin, Germany

14:00 **Climate change and variability in Poland from Copernicus's time to present**
Rajmund Przybylak, Nicolaus Copernicus University, Toruń, Poland

14:30 Break

14:50 Final discussion and concluding remarks

16:00 Closing for the day

THURSDAY, 15 May 2014

All day excursions

FRIDAY, 16 May 2014

Departure of participants

Poster Discussion

Tuesday, 13 May 2014, 14:00

Session A: Reconstructions of palaeo-environmental change:
Geological proxies and numerical modelling

Poster A01

A wind direction analysis for the Baltic Sea region: Is it possible to draw conclusions from mean wind statistics on extreme wind statistics?

Svenja Bierstedt, Zorita E., Hünicke B.

Poster A02

The cool event about 8.2 ka ago in the Baltic Sea Basin: proxies data and paleoclimatic reconstructions

Irena Borzenkova, Kuznetsov D., Sapelko T.

Poster A03

Evolution of the Littorina Sea in the geochemical record of Holocene sediments from western Baltic

Robert Kostecki

Session B: Modelling of climate change: How reliable are future projections?

Poster B01

Interactions between phytoplankton blooms and environmental conditions in the Baltic Sea – a modelling study

Agata Cieszyńska (Zuzewicz), Stramska M.

Poster B02

Changes of water balance elements of the Curonian Lagoon in the 21st century

Darius Jakimavicius, Kriaučiūnienė J.

Poster B03

How reliable are future projections of threats from the sea level rise?


Beata Kowalska, Sztobryn M.

Poster B04

Sea level change scenarios in the Polish coast during 21st century

R. Wójcik, Jakusik E., Pilarski M., Biernacik D., Marosz M., Miętus M.

Session C: Natural dynamics of the coastal zone and the socio-economic response from prehistoric to recent times



Poster C01

The Gulf Of Finland: Social and Economic Problems of St.-Petersburg in Conditions of the Natural Environment Change

Irina Baykova, Kostrukova O.

Poster C02

Water and waste management by household in terms of changes in the law

Iwona Foryś, Putek-Szeląg E.

Poster C03

Valuation of environmental damage from the Penglai 19-3 oil spill, China

Xin Liu, Pan G.

Poster C04

Analysis of social response to the threat of flooding , abrasion and methods coastal management, Hel Peninsula, Poland

Marzenna Sztobryn, Zawadzka-Kahlau E., Kowalska B.

Poster C05

Coastal environment monitoring using HF radar system in the Yantai waters, China

Cheng Tang, Liu X., Xing Q., Zhang H., Shi P., Mayerle R., Harff J.

Poster C06

The dynamic distribution of green tides in Yellow sea and East China Sea and its relations to marine water quality conditions

Xing Q., Zheng X., Liu X., Tang C., Shi P., Harff J.

Session D: Climate change and regional planning



Poster D01

Multiyear trends and variability in the Baltic Sea level derived from satellite radar altimetry and ocean model

Jagoda Bialogrodzka, Jakacki J., Stramska M.

Poster D03

The cyclical nature of seasonal precipitation in Pomerania in the period 1951 – 2010

Małgorzata Czarnecka, Nidzgorska-Lencewicz J.

Poster D04

Mean Baltic Sea Level in a changing climate – a review of the observational period

Birgit Hünicke, Madsen K.S., Johansson M., Zorita E.

Poster D06

Influence of climate change on the ice regime of the Belorussian lakes

Alena Kvach, Chekan R.

Poster D07

Local climate changes and problems of hydrological division into districts of the territory of Belarus

Petr Lopuch

Poster D09

Variability of bioclimatic conditions in the Polish coastal region of the Baltic Sea

Agnieszka Mąkosza

Poster D10

Climate change and adaptation measures of agriculture to these changes in Belarus

Viktor Melnik, Kamarouskaya A.

Poster D11

Signal of wave climate change reflected by wave set-up height

Katri Pindsoo, Soomere T.

Poster D12

Spatial and temporal variability of sea surface temperature in the Baltic Sea based on 30-years of satellite data

Malgorzata Stramska, Wachuda A.

Poster D13

Assessment of soil surface water resources from SMOS satellite and in situ measurements in changing climatic conditions

Bogusław Usowicz, Marczewski W., Łukowski M. I., Słomiński J., Usowicz J. B., Lipiec J., Rojek E.

Session E: Changing Baltic Sea coasts and their sustainable protection



Poster E01

Dynamics of Baltic Sea environment under the influence of climate changes (case study of Lithuanian most famous coastal summer resorts)

Aldona Baubiniene, Morkunaite R.

Poster E02

Sandy beach recurrence to the quasi equilibrium profile after beach replenishment

Edvardas Valaitis, Žiauberis M., Ivoškytė S., Gulbinskas S., Kelpšaitė L

Poster E03

On sensitivity of wave-driven alongshore sediment transport patterns with respect to model setup and sediment properties

Maija Viška, Soomere T.

Poster E04

Can we stop erosion by protecting the whole Polish coast?

Elzbieta Zawadzka-Kahlau

Poster E05

Thermal conditioning of seasonal variability of PM10 concentration in Zachodniopomorskie Voivodeship

Kacper Rawicki

Copernicus Symposium



Poster COP1

Nicolaus Copernicus - 500 years of hand written manuscript entitled "Commentariolus" (The Commentary)

Roman Marks, Lewczuk K.

Baltic Earth

Baltic Earth - Earth System Science for the Baltic Sea Region

H. E. Markus Meier, Rutgersson A., Reckermann M.

and the Baltic Earth Interim Science Steering Group

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