

14 Sept, Tuesday (Pick up: [Hostel](#); afternoon: IOW)

Morning: 8:30 – 13:00:

Bus trip along the coast: “Coastal protection – planning for the future” (L. Tiepolt, StALU, P. Fröhle, Rostock University)

Afternoon: 13:30 – 17:30:

Practical: Climate change movie (*screening*)

Lecturers: N. Stybel, I. Haller, S. Schumacher (EUCC-D)

15 Sept, Wednesday (Location: IOW)

Climate Change - Physics & Modelling

Morning: 9:00 - 12:00

- The Baltic Sea system: State and evolution during the last century (R. Feistel, IOW)
- The Baltic Sea system: Climate projections for the next century (U. Gräwe, IOW)

Afternoon: 13:00 -16:30

- Practical: GOTM modelling

Lecturer: I. Hense (University of Hamburg-IHF, KlimaCampus)

Evening: 17:00-21:00

Golf-event and dinner

16 Sept, Thursday (Location: IOW)

Morning: 9:00 -12:30

Climate Change – Fisheries and Aquaculture

- 09:00 Climate Change adaptation – a role play (G. Schernewski, N. Stybel, IOW)
- 10:00 Mussel farming – (N. Stybel, IOW)
- 11:00 Fisheries/Aquaculture (P. Krost, CRM)

Afternoon: 13:30 -17:30

Climate Change - Adaptation

- 13:30 Climate Change adaptation – a role play (G. Schernewski, N. Stybel, IOW)
- 15:00 Regional adaptation in Mecklenburg-Western Pomerania (B. Romberg, Ministry MV)
- 16:00 Land-use adaptation: new perspectives (lecture & practical) (G. Schernewski, IOW)

17 Sept, Friday (Location: IOW)

Morning: 9:00 -12:30

Climate Change - Adaptation

- Climate Change adaptation – a role play

Lecturers: G. Schernewski, N. Stybel (IOW)

Afternoon: 13:30 -17:00

- Practical: Climate Change movie (N. Stybel, I. Haller)
- Summer school evaluation (G. Schernewski)

Evening:

Fare well dinner & group event

The summer school is a joint initiative of
the Leibniz-Institute for Baltic Sea Research
Warnemünde (IOW),
GKSS Research Center
& Alfred Wegner Institute Bremerhaven (AWI)

supported by
EUCC- The Coastal Union Germany,
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Summer School 2010



Climate Change in the Baltic:
From global problems to local adaptation

5 - 18 Sept 2010

Rostock-Warnemünde, Germany

Programme (update 3 September, 2010)

6 Sept, Monday (Location: IOW)

Morning: 9:00 -12:30

Welcome (*B v. Bodungen, G. Schernewski*)
On the History of the Joint Summer School (*G. Flöser, GKSS*)
Participants introduce themselves (Short presentations)

Afternoon: 13:30 -17:00

Climate Change – Global Scenarios, Models & Consequences

- Major global warming processes and future emission scenarios
- Global climate models – uncertainties and problems
- Climate variations – causes and future prognosis
- Major global effects and consequences of CC
- Consequences for oceans: Storms, waves and surges

Lecturers: *E. Zorita, R. Weisse* (GKSS), (*H. Burchard, IOW*)

Evening: (17:30)

Get-together – wine bar & snacks
(*DejaBo, Mühlenstr. 34, Warnemünde*)

7 Sept, Tuesday (Location: IOW)

Morning: 9:00 -12:30

Climate Change in the Baltic Region: an Overview

- Regional Climate Change models and prognosis
- Climate Change effects in different Baltic regions

Lecturers: *J. Doerffer, M. Reckermann* (GKSS)

Afternoon: 13:30 -17:00

Climate Change and Marine Ecology

- Baltic ecosystem reactions on internal and external forcing
- Nutrient biogeochemical cycles + short microscopy lab tour
- Benthic biodiversity (ecosystem functioning in the Baltic Sea)

Lecturers: *F. Pollehne, M. Voss, M. Zettler* (all IOW)

Evening:

Joint beach sports event with 1st ScanBalt summer school
on "New Developments and Perspectives in Aquaculture"

8 Sept, Wednesday (Location: IOW)

Morning: 9:00 -12:30

Climate Change and Marine Ecology

- Ecosystems of the coastal zone - global and regional aspects
- Boreal lagoons – sentinels of global change
- Microbial diversity and functions in the Baltic Sea (+ Lab)
- Bacterial structure and function at the sea surface (micro-)layer

Lecturers: *R. Asmus* (AWI), *A. Razinkovas* (CORPI), *G. Jost* (IOW), *C. Stolle* (IOW)

Afternoon: 13:30 -17:00

Climate Change and Marine Chemistry

- Characterization of the marine CO₂ system
- The Baltic Sea carbon cycle
- Anthropogenic perturbations (CC, acid rain, riverine alkalinity)
- Practical exercise

Lecturer: *B. Schneider* (IOW)

9 Sept, Thursday (Location: IOW)

Climate Change and River Basins

Morning: 9:00 -12:30

- Water and nutrient fluxes in river basins: the global perspective
- Climate Change and land-use: socio-economic aspects
- Water and nutrient fluxes in river basins – a Baltic example
- Changing river basin fluxes and their consequences for the sea

Afternoon: 13:30 -17:00

- Practical: MONERIS and the Scenario-manager - a management tool

Lecturers: *U. Hirt* (IGB), *C. Heidecke* (vTI), *I. Krämer* (IOW)

10 Sept, Friday (Location: Rostock University; City)

Morning: 9:00 -12:30

Climate Change and Ecosystem Modelling

- Introduction to ERGOM and Climate Change simulations
- Practical: The model ERGOM and its application

Lecturer: *T. Neumann* (IOW)

Afternoon: 13:30 -17:00

- Practical: The model ERGOM and its application
- Lecturer: *T. Neumann* (IOW)

- Introduction: Climate Change movie
- Lecturer: *N. Stybel* (EUCC-D)

Evening:

Guided tour through historic city centre of Rostock
Joint event with 1st ScanBalt summer school

11 Sept, Saturday

Free time

Evening: *Joint Pub Crawl with ScanBalt Summer School (optional)*

12 Sept, Sunday

All-day:

Cycling tour (collecting material for Climate Change movie)

13 Sept, Monday (Location: IOW)

Sea Level Rise and Coastal Protection

Morning: 9:00 -12:30

09:00 The long-term history of the southern Baltic coastline (SINCOS) (*J. Harff, Szczecin University*)
10:15 From a global perspective to sea level rise along the southern Baltic Sea (*J. Hofstede, MLUR*)
11:00 Role play "public participation in coastal protection" (*J. Hofstede, MLUR*)

Afternoon: 13:00 -17:30

13:00 Role play "public participation in coastal protection" (*J. Hofstede, MLUR*)
15:30 Adaptation to sea level rise and local coastal protection measures (*P. Fröhle, Rostock University*)
17:00 Introduction for next day's bus trip along the coast (*L. Tiepolt, StALU*)

Evening: 17:30

Students meet lecturers at wine bar
(*DejaBo, Mühlenstr. 34, Warnemünde*)