

International Summer School for Students

# Climate Change in the Marine Realm

**10. – 24. September 2012**

Wadden Sea Station, List/Sylt (10. – 15.9.2012),  
and University of Bremen (16. – 24.9.2012),  
Germany

**Key Speakers:**

Olaf Schilling (University of Utrecht)  
Karsten Reise (Alfred Wegener Institute)  
Hans von Storch (Helmholtz Centre Geesthacht)  
Antje Stokman (University of Stuttgart)  
Peter Lemke (Alfred Wegener Institute)  
Katrin Rehdanz (Kiel University)  
Martin Visbek (GEOMAR Helmholtz Centre  
for Ocean Research)  
Torsten Bickert (MARUM)  
Katherine Richardson (University of Copenhagen)  
Laurenz Thomsen (Jacobs University Bremen)  
Isabelle Ansorge (University of Capetown)  
Guy Brasseur (Climate Service Center)  
... and more

Get insights into the role of the ocean in the climate system and understand the complex connections and interactions within the Earth system by means of examples of the marine realm. Find out more at [www.awi.de/climateschool](http://www.awi.de/climateschool) or contact us at [climateschool@awi.de](mailto:climateschool@awi.de).

The school is open to students from different disciplines within the natural sciences or engineering sciences at Master or early PhD level from around the world. It will be held in English.

**Applications will be accepted until 31. March 2012**

Stipends cover travelling, boarding, and lodging.

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## International Summer School for Students

This summer school is targeted at Master or early PhD students, whose research project covers an aspect of marine life and the impact of climate change thereupon. It builds up on four teaching modules each encompassing two days. Each teaching module is self-contained and supervised by two lecturers.

## Participation Details

Thanks to the generous funding provided by Stiftung Mercator, stipends for 40 participants from around the world can be provided.

The summer school will take place at two places in Germany. The first week will be spent at the Wadden Sea Station in List/Sylt, the second week at the University of Bremen. Travel from Sylt to Bremen will be organised for all participants.



## Contact

[www.awi.de/climateschool](http://www.awi.de/climateschool)  
[climateschool@awi.de](mailto:climateschool@awi.de)

## Deadline for Application

Applications are accepted until  
**31. March 2012.**

## Application Process

You can apply online via our website under Application. To apply, you need to fill out the online questionnaire and provide supporting documents.

Prepare the documents in ONE PDF-file whose total size does not exceed 2 MB.

The documents needed are:

- Proof of enrolment
- CV
- Letter(s) of recommendation from your supervisor(s) – we require at least one, but would prefer if you provided two letters.
- Grade transcripts for your current course of studies and the degrees you have already obtained (e. g. Bachelor or Master)

For the letters of recommendation, you can find a form on our webpage. Please ask your supervisors to use this.

## The Modules and the Main Topics

### Marine Ecosystems and Climate Change

- Basics of ocean biological processes
- Effects of warming of ocean waters
- Ocean acidification
- Low oxygen zones

### Climate Change and Coastal Seas

- Sea level rise and coastal impacts
- Arctic coasts – erosion
- Wadden Sea – endangered by climate change
- Climate Change and coastal Citizens
- Marine weather risks in the coastal zone

### The Ocean in the Climate System

- Present Climate Processes
- Climate in historical view
- Climate events and cycles of the Cenozoic – examples from ocean drilling

### Observing the Ocean

- Remote Sensing
- In situ measurements
- Famous long-term data series and their messages
- Observing technology
- World Data Centers

## Wadden Sea Station, List, Sylt

The Wadden Sea Station Sylt was founded in 1924 as a laboratory of the "Biologische Anstalt Helgoland" for the study of the European oyster.

Since 1998 the Station is part of the Alfred Wegener Institute for Polar and Marine Research. The main objective of the Wadden Sea Station Sylt is marine ecological research in the Wadden Sea and in adjacent shallow waters. The aim is to investigate important ecological processes, to analyse changes in the coastal ecosystem and to compare these alterations with those in other coastal areas of the world.



## MARUM – Center for Marine Environmental Sciences at the University of Bremen

Since 1996, the Department of Geosciences and other departments at the University of Bremen work closely together with the Alfred-Wegener-Institute for Polar- and Marine Research, the Max-Planck-Institute for marine Microbiology, the Center for marine tropical Ecology in Bremen and the Research Institute Senckenberg in Wilhelmshaven in the Center for Marine Environmental Sciences.

The MARUM aims at unravelling the role of the oceans in the Earth system by employing state-of-the-art methods. It examines the significance of the oceans in the framework of global change, quantifies interactions between the marine geosphere and biosphere, and provides information for a sustainable use of the ocean.

The research focuses on the ocean margins (i.e., the joint between oceans and continents) and the



## Steering Committee

Prof. Karin Lochte, Alfred-Wegener-Institute  
Prof. Peter Lemke, Alfred-Wegener-Institute  
Prof. Jelle Bijma, Alfred-Wegener-Institute  
Prof. Michael Schulz, University of Bremen,  
Prof. Gerhard Roth, University of Bremen  
and European Campus of Excellence  
(Coordinator)  
Prof. Peter Burkill, Sir Allister Hardy Foundation, UK  
Prof. Douglas Wallace, Dalhousie University, Canada

## Organisers

Dr. Angelika Dummermuth  
Dr. Klaus Grosfeld  
Anja Kottsieper  
Elisa Mussack  
Alfred-Wegener-Institute for Polar and Marine Research

## Timeline

Applications are due on 31. March 2012

Selected participants will be notified early May

Summer School  
in List/Sylt from 10. - 16. September,  
in Bremen 17. - 24. September 2012