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Summer School on Global Warming and Sustainable Water Management

Interaction and Effects

November 16 – 22, 2011 / Braunschweig, Germany



Photo: Development of a huge underground drinking water resource in Al-Ghailah, southern Yemen, © Saeed Al-Batati/IRIN

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Summer School on Global Warming and Sustainable Water Management

Interactions and Effects

Overview

The summer school purposes to increase the understanding of the interactions between climate change and water management.

The aim is to clarify causes and effects of climate change and to underline the benefits of a sustainable management of water resources on global warming and on water-, energy- and nutrient cycles.

With respect to the different home countries of the participants and their specific questions and problems, strategies will also be discussed how the water sector can contribute to cope with climate change on a local scale.

Objectives

- Representing the main issues about the climate change especially regarding the interactions between global warming and water management
- Identifying common problems or local differences with respect to the home countries of the participants
- Increasing the awareness of the global warming problem and developing solutions to counteract climate change and to reduce its effects
- Experiencing interactive working to learn about and to address this complex problem by involving experts working on different topics from different countries

- Introducing new technologies and policies for a energy efficient, low-carbon future in the water and wastewater sector
- Showing the possibilities for energy efficiency improvements in the area of water management

Topics

- Global Warming – Identifying the problem
- Activities in the water sector contributing to greenhouse gas emissions
- Carbon emissions from Wastewater Treatment Plants (WWTP)
- Energy production on WWTP
- Improving energy efficiency of water and wastewater treatment
- Wastewater reuse in industry and agriculture
- Energy sources at WWTP
- Alternative technologies for water management
- How to change social patterns and government policies
- Improving social awareness

Course Organization

The course consists of lectures, discussion sessions, participation to the two day international symposium „Re-Water Braunschweig“ on water reuse and inspecting the techniques applied for a comprehensive water and nutrient recycling concept in the city of Braunschweig.

Schedule		
Wednesday	November 16, 2011	Arrival and Get-Together
Thursday	November 17, 2011	Identifying the Problem: Interactions of global warming and the water sector. Discussion.
Friday	November 18, 2011	Improving energy efficiency in water and wastewater sector. Energy production from wastewater and sewage sludge. Nutrient recycling from wastewater and sewage sludge. Wastewater reuse in agriculture and industry. Discussion.
Saturday	November 19, 2011	Excursion: Nutrient / Water Recycling and biogas production in Braunschweig – Applied technologies and concepts.
Sunday	November 20, 2011	Free time available
Monday & Tuesday	November 21, 2011 & November 22, 2011	Participating the international symposium “Re-Water Braunschweig” (program is attached)

Lecturers

- Prof. Dr. Norbert Dichtl, Prof. Dr. Thomas Dockhorn**, Institute of Sanitary and Environmental Engineering, TU Braunschweig.
- Prof. Dr. Ulrich Menzel**, Institute of Social Sciences, TU Braunschweig.
- Prof. Dr. Göksel Demirer**, Department of Environmental Engineering, Middle East Technical University Ankara.
- Dr. Samir Ibrahim Hag**, Sudan.
- Prof. Dr. José Tavares Araruna Júnior**, Department of Civil Engineering, Pontificia Universidade Católica do Rio de Janeiro.

Target Audience

PhD students, post-doctoral researchers, senior research scientists and engineers with an environmental science background interested in acquiring competence.

Number of participants

The number of participants is confined to 20.

Application

Please apply online until August 15, 2011:
<http://www.exceed.tu-braunschweig.de/apply/summerschool>