

As of 10 March 2014

Announcement

Summer School

„Methods and Tools for the Assessment, Modeling and Monitoring of Central Asian Water and Land Resources“

1 Dates & Venue

Dates: 12th – 24th May 2014
Venue: German-Kazakh University (DKU),
ul. Pushkina 111/113
050010 Almaty, Republic of Kazakhstan

2 Description

The Summer School will introduce scientific concepts, methods and tools for the analysis, modeling and monitoring of land and water resources in Central Asia. These methods are of great value in a framework of integrated water and land resources management (IWRM and IWLM, respectively).

The 2-week Summer School will combine theoretical lectures and practical exercises with discussion sessions on the implementation of IWRM and IWLM in Central Asia. The programme will include an introduction to geographical-informational systems (GIS), an overview on remote sensing applications for land and water resources monitoring, an introduction to hydrometeorological monitoring techniques, climate change impact assessment, and assessment of irrigation efficiencies.

The Summer School is organized in the frame of the German Water Initiative for Central Asia ("Berlin Process"), which has been launched by the German Federal Foreign Office in 2008 and is being implemented by DKU (www.dku.kz), the GIZ Transboundary Water Management in Central Asia Programme (www.waterca.org) and the CAWA project (www.cawa-project.net).

Language

The courses will be given in English and Russian, hence intermediate knowledge of both languages is a prerequisite to participation.

Lecturers

- Dr. Iskandar Abdullaev, Regional Environmental Centre for Central Asia CAREC, Kazakhstan
- Prof. Dr. Christopher Conrad, University of Wuerzburg, DLR, Germany
- Yvonne Dervedde, University of Giessen / ZEU, Germany
- Dr. Abror Gafurov, GFZ German Research Centre for Geosciences, Germany
- Olga Kalashnikova, Central Asian Institute for Applied Geosciences, Kyrgyzstan
- Prof. Dr. Martin Kappas, University of Goettingen, Germany
- Fabian Löw University of Wuerzburg, Germany
- Birgit Mannig, University of Wuerzburg, Germany
- Alexander Nikolayenko, GIZ Transboundary Water Management in Central Asia Programme, Kazakhstan
- Dr. Samuel Nussbaumer, Zurich University/World Glacier Monitoring Service, Switzerland
- Prof. Dr. Frank Schrader, GIZ Transboundary Water Management in Central Asia Programme, Germany
- Katy Unger-Shayesteh, GFZ German Research Centre for Geosciences, Germany
- Dr. Anatoli Sorokin, SIC ICWC, Uzbekistan
- Prof. Dr. Alim Pulatov, TIIM Tashkent Institute for Irrigation and Melioration, Uzbekistan (t.b.c)
- Dr. Sergiy Vorogushyn, GFZ German Research Centre for Geosciences, Germany

3 Organizers

"Regional Research Network Water in Central Asia"

CAWa Project

www.cawa-project.net



German-Kazakh University

Master programme "Integrated Water Resources Management"

ul. Puschkina 111/113
050010 Almaty, Kazakhstan

www.dku.kz





University of Wuerzburg

Institute for Geography and Geology
Department for Remote Sensing

Wuerzburg, Germany

www.geographie.uni-wuerzburg.de



Helmholtz Centre Potsdam

GFZ German Research Centre for Geosciences

Potsdam, Germany

www.gfz-potsdam.de



Justus-Liebig University

Center for international Development and Environmental Research (ZEU)

Giessen, Germany

www.uni-giessen.de/cms/fbz/zentren/zeu/



Freie Universität Berlin

Berlin Centre for Caspian Region Studies
(BC CARE)

MA Degree Program „Integrated Water Management“ at DKU (Almaty)

Berlin, Germany

<http://www.fu-berlin.de/en/sites/iwm>



Deutsche Gesellschaft für Internationale
Zusammenarbeit (GIZ)

**Transboundary Water Management in Central
Asia Programme**

Regional Office, Bishkek, Kyrgyzstan

<http://www.waterca.org>



Contact to the organizers:

Dr. Barbara Janusz-Pawletta, German Kazakh University, janusz-pawletta@dku.kz

4 Participation and Funding

The Summer School addresses dedicated master and PhD students as well as junior university teachers and researchers with interest in tools for Integrated Water and Land Resources Management and its practical implementation. Eligible are participants from the following Central Asian countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, and Afghanistan.

Participants will be selected based on their application documents (motivation letter, CV).

The CAWA project provides funding for travel and accommodation expenses for the accepted participants. Accommodation will be organized by the host institution DKU.

5 Application

Interested students and researchers are expected to fill in the application form and send it back to the organizers. Please attach a short CV and a motivation letter.

Visa support will be provided by DKU (please note the strict deadline of 31st March for the submission of the application form and passport data).

Deadlines

Submission of application form and abstract	31st March 2014
Notification of acceptance	7th April 2014
Issue of invitations for visa application	11th April 2014

6 Preliminary Programme

Methods and Tools for the Assessment, Modeling and Monitoring of Central Asian Water and Land Resources	
Monday, 12th May 2014 Welcome / GIS-Tools	
	Welcomespeeches and Opening
	Introduction round
	<i>GIS Tools</i> Lecture: The use of Remote Sensing and GIS for land and water management in Central Asia Practical Course: Intensive GIS Course I
	Welcome Dinner
Tuesday, 13th May 2014 Land Mapping	

	Lecture: Land cover dynamics and land cover change in Central Asia
	Practical Course: Land cover classification
	Practical Course: Change Detection
Wednesday, 14th May 2014 Hydrometeorological monitoring techniques / Monitoring of the Cryosphere I	
	Lecture: Introduction to hydrometeorological monitoring
	Lecture: Monitoring data from national networks
	Lecture: Discharge measurements
	<i>Monitoring of the Cryosphere</i> Workshop: Snow cover monitoring using remote sensing data, MODSNOW-Tool
Thursday, 15th May 2014 Monitoring of the Cryosphere II / Climate Change Impact Assessment I	
	Lecture: Introduction to glacier monitoring
	Lecture: Glacier Monitoring, global data bases
	<i>Climate change impact assessment I</i> Lecture: Climate variability and climate change in Central Asia
	Practical Course: Analysing station data: levels, level changes and trends
Friday, 16th May 2014 Climate change impact assessment II	
	Lecture: Climate models and their use
	Practical Course: Methods of statistical downscaling of climate models
	Lecture: River runoff modeling in Central Asia
Saturday, 17th May 2014 Excursion	
	Full-day bus excursion
Saturday, 18th May 2014 Recreation day	
	City Tour Almaty
Monday, 19th May 2014 GIS Tools II	
	Practical Course: Intensive GIS Course II
Tuesday, 20th May 2014 GIS Tools III / Climate change impact assessment III	
	Practical Course: Intensive GIS Course III

	<p><i>Climate change impact assessment III</i></p> <p>Practical Course: Aggregation and visualisation of climate change indicators at different scales</p>
Wednesday, 21th May 2014 Support of irrigated land and water management I	
	Lecture: Water Requirement and Water Footprint as planning instrument–preliminary calculations for elaborating water saving options at WUA and Province scale
	Lecture: Meeting the demand from system side: Water allocation modeling
	Practical Course: Calculating irrigation water demands and water footprint at the field level, practical example on the WUA level
Thursday, 22th May 2014 Support of irrigated land and water management II	
	Lecture: Extrapolation of the results from the field level to the Oblast-Level, classification and yield mapping
	Practical Course: Yield modeling and productivity indicators
Friday, 23th May 2014 Integrated Water Resource Management	
	Lecture: Introduction to IWRM
	Lecture: Data management and legal framework / transparency and communication
	Case study: Water sector reform in Tajikistan/Kyrgyzstan
	Lecture: IWRM regional cooperation in Central Asia
	Lecture: Introduction to Basin Planning
	Case study: River basin authorities in the Isfara River basin
Saturday, 24th May 2014 Panel discussion, review and closing session	
	World Café / Discussion
	Feedback to the organizers
	Certificate Ceremony
	Closing and Goodbye

The preliminary programme is subject to changes.