

Knowledge development experience of the Kazakh-German University. Knowledge development in CA.

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Content



Transfer of knowledge



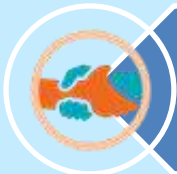
Research



Field research



Capacity building



Policy outreach

Transfer of knowledge



MA COURSES HIGHLIGHTS

Social & Political

- Environmental policy
- Project planning
- Environmental and water law
- integrated watershed management

Technical

- Land and water interaction
- Hydraulic engineering and constructions
- Water system and climate
- Data management and onitoring



“Berlin Process” – offer of the German Federal Government from 2008 turning the water into a subject of successful transboundary cooperation

International experience knowledge exchange



MA COURSES HIGHLIGHTS

Target groups

Young Professionals



Students



Teachers



Goal:

- support for the countries of Central Asia
- capacity building in IWRM for future



Use of Mobile Apps (ST)

The collage displays four different elements related to the mobile app project:

- Physical Logbook:** A handwritten logbook with a grid and a line graph showing data trends over time.
- Login Page:** A mobile app interface for logging in with fields for Username (azamat), Password (azik1234), and a Login button.
- Settings Page:** A mobile app interface for settings with fields for Server IP (192.168.0.1), Server Port (3344), Language (English), and a Submit button.
- Data Entry Screen:** A mobile app interface for entering data, featuring a table with columns for Basin, Index, Date, H8, H20, t-вод, t-воз, and Ice phenomena.

Бассейн	Индекс поста	Дата	H8	Изм	H20	t-вод	t-воз	Ледовые явления
Бассейн озера Балхаш, Заилийского Алатау	476	19,08	202	-26	215	9,4	1,9	Снежуря, 50%

From March to November 2015, KNU students participated in a pilot project initiated by the Kazakh-German University (KNU) and the World Bank (WB), which was dedicated to develop 3 mobile applications for: KazHydroMet center and International Fund for the Aral Sea Rescue (IFAS).



ECO-talk (Incubator) 2018

The ECO-Talk project is a platform that promotes young eco-innovators and eco-entrepreneurs to implement effective projects in the field of environment protection in Kazakhstan.



THE EM-TECHNOLOGY PROJECT



THE "FAMILY" PROJECT



ECO-TALK TEAM



THE "HYDROTORAN" PROJECT

The ECO-Talk consists of two key activities: an incubator program and an environmental forum. The incubator comprises a mentoring program which aims at improving and transforming the innovations into successful projects with potential business or social impact. The mentoring program includes specialists from different sectors and focuses on practical skills using innovative learning approaches

Research



CAMP4ASB
Climate Adaptation & Mitigation
Program for Aral Sea Basin
CENTRAL ASIA



THE WORLD BANK
IBRD - IDA | WORLD BANK GROUP



United Nations
Educational, Scientific and
Cultural Organization

UNESCO Chair on
Water Resources Management in Central Asia
German Kazakhstan University, Almaty

Student research competition on sustainable management of natural resources in Central Asia and Afghanistan



Goal:

- to build capacities of the young generation of specialists in the water, agricultural and environmental protection sectors in CA and Afghanistan.



Participants:

Final-year master students, recent bachelor graduates, graduate students, final-year students of a 5 year-study program, from universities within and outside CA, who focus their research on sustainable management of water, land and energy resources in CA and/or Afghanistan.



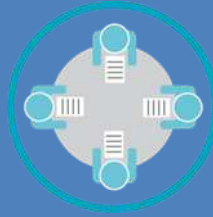
Financial Support:

Research grants (10 month) - USD 1,500



Outcome:

High-quality scientific papers published in Central Asian Journal of Water Research (CAJWR).



GKU Students Research Grants

UZBEKISTAN

- Reducing water pollution and carbon emissions from irrigated areas by improving irrigation management and rural livelihoods.

PAKISTAN

- Understanding our joint water-climate change challenge and exploring policy options for cooperation on the Afghan-Pak transboundary Kabul River Basin

KYRGYZSTAN

- Integrated water resources management and strategic environmental assessment of Kabul and Amudarya Rivers

TAJIKISTAN

- Risk management and assessment of water resources of the Amu Darya River Basin under conditions of climate change and construction of large reservoirs

AFGANISTAN

- Satellite-enhanced snowmelt flood and drought predictions for the Kabul River Basin (KRB) with surface and groundwater modeling



Regional scientific colloquium for Central Asian and Afghan young scholars (our future)



Goal:

To foster scholarly growth and innovation across CA and Afghan academic institutions by strengthening research and academic writing skills of post-graduate scholars.



Participants:

PhD candidates and/or aspirants, whose research interest focuses on water-related issues in Central Asia and Afghanistan.



Duration:

One semester (5 months)



Funding:

Scholarships for participants travel & accommodation academic and research materials



Outcome:

contributions to the Central Asian Journal of Water Research (CAJWR). creation of regional research 'incubator', where scholars can share innovations and collaborate, further maturing the regional academic network

Central Asia Waters project

(since 2009)

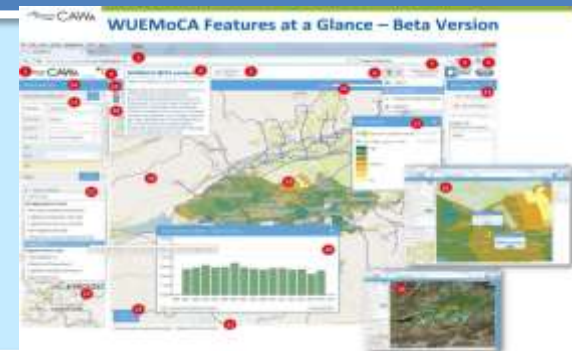
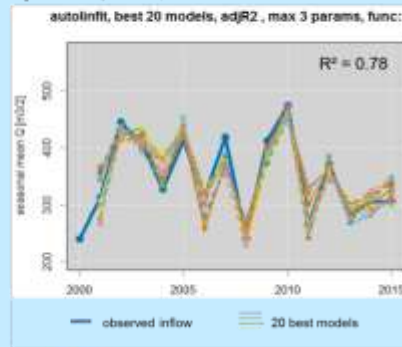
CAWa: Seasonal runoff forecast and drought monitoring

CAWa: Land use monitoring

Status of model implementation at Hydromets

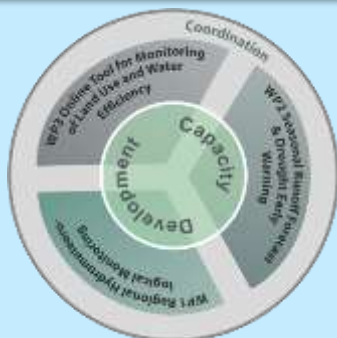
River basins	
KAZ	Sharyn Shelek Oba Ulba
KGZ	Naryn Upper Chu Talas Ala-Archa
TAJ	
TKM	Murgap Upper Amudarya
UZB	Inflows to Charvak r. Andizhan r.

Example: Modeled mean seasonal inflow to Charvak reservoir (Gavrilenko, 2016, based on Apel et al., 2016)



CAWa: Regional Hydrometeorological Monitoring

Applied research: Central Asia waters (CAWa) network





High-level publications (i.e CAJWR e-journal)

www.water-ca.org

Central Asian Journal of Water Research (CAJWR)
Центральноазиатский журнал исследований
водных ресурсов

Articles ▾ For Authors Editorial Board About Issues Blog

53 avg days to decision

95% acceptance rate

JOURNAL STATISTICS

January 21, 2018

CAJWR Journal

47

17

Abstract

manuscripts in progress

Recent blog posts

Monthly Scientific Digest
March Issue of the Monthly Scientific Digest gives a short overview of recent research trends in the field of Water Resources in Central Asia.

Monthly Scientific Digest
February Issue of the Monthly Scientific Digest gives a short overview of recent research trends in the field of Water Resources in Central Asia.

Now open: Call for Papers - Regular Issue
CAJWR seeks original research dedicated to all aspects of water management in the region of Central Asia and Afghanistan. For further information: <http://www.water-ca.org/issue/504>

About

on-line
bi-lingual (Russian/English)
peer-reviewed
interdisciplinary
open-access
free
supervised by an editorial board
consist of regional and
international experts

Research Areas

Economic & Financial
mechanisms
Climate & Environment
Hydro technical facilities
Water Governance
Capacity Development
Food Security
Drinking Water & Sanitation

РОССИЙСКИЙ ИНДЕКС
НАУЧНОГО ЦИТИРОВАНИЯ
Science Index

Crossref

Google
Scholar

Field research



Annual IWRM contest since 2014

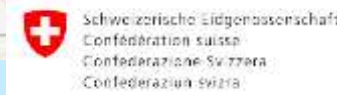
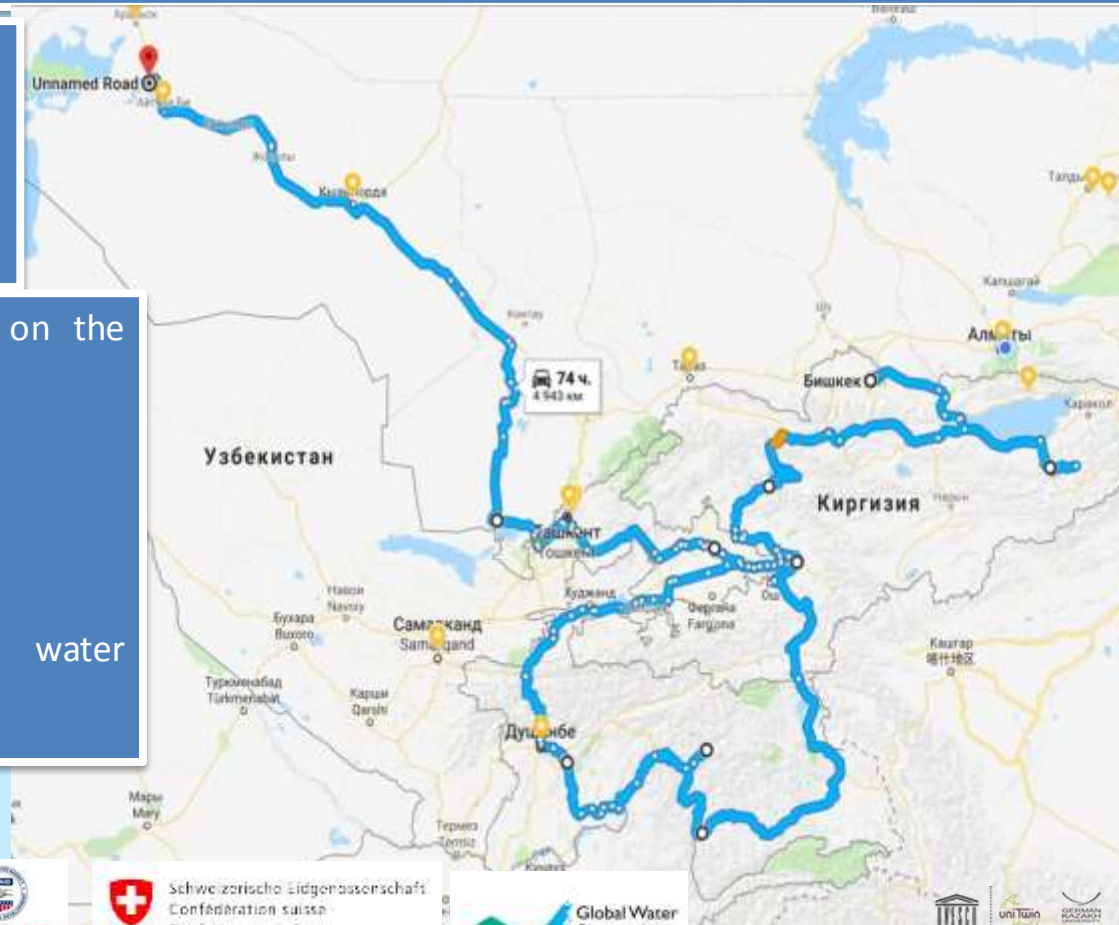
Expedition “ From Glaciers To The Aral Sea” (2018)

Participants

12 students to be divided into 6 study- research teams and to be supervised by 1 international researcher to focus on the particular aspects of IWRM.

Directions

The impact of climate change on the water resources of Central Asia
 Water ecosystems
 Water and agriculture
 Transboundary cooperation
 Water and energy
 Social economic aspects of water management





Water Management and Water Quality in Kaskelen River Basin

a students' centered scientific based case study



Monitoring

- * Biological
- * Physical
- * Chemical

Outcome: Enhanced research skills of IWRM Master students within interdisciplinary approach

Up-stream



Down-stream





Water
issues of
Herat

Session in Dushanbe

GOAL: water management
and importance of youth
engagement in water
management affairs.



Capacity building

Empowerment

In cooperation with practitioners and decision makers



ACADEMIA

Academia

- Quality of teaching materials
- Capacity building for teachers
- Science
- Field activities
- Equipment



Youth

- Quality of education
- Hands on experience
- Field experience
- New technologies
- Research opportunities



Life long learning

The overall goal: Students

BA/MA/PHD

Knowledge

- Lectures
- Own Research
- Project development

Skills

- Research
- Field Work
- Project management

Project Proposals Development

Summer school on Issik-Kul lake, Kyrgyzstan, 2017



Young people from all over Central Asia were trained to draft and embody various projects in water related areas. Most of the projects developed during the CAYFWater summer school were appointed to execute during the Autumn of 2017.





Development of water academic network

Network Directions

1. Capacity building

2. Developing IWRM courses and unified curriculums

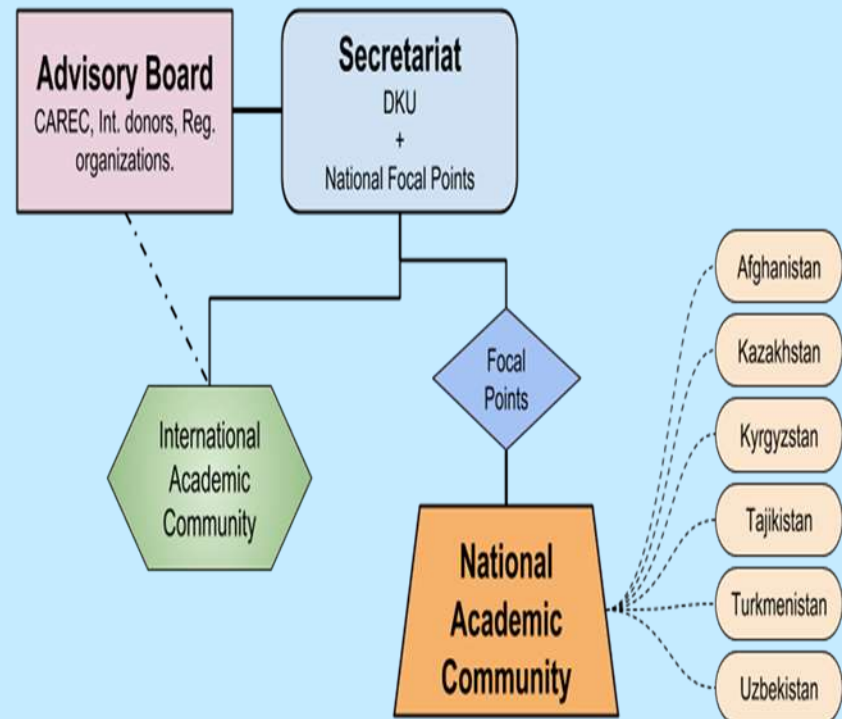
3. Scientific research

4. Internationalization

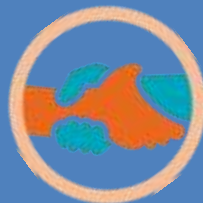
5. Contribution to society development

6. Capacity building for young generation.

Network Structure



Policy outreach



UNECE conference of parties. Youth session

Highlights

The eighth session of the Meeting of the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (MOP8) serviced by UNECE took place on 10-12 October 2018 in Astana, Kazakhstan.



Unprecedented interests from countries to accede to the Water Convention

This Meeting of the Parties was the first one held in Asia. Around 88 countries, Parties and non-Parties to the Convention, participated along with representatives of joint bodies, International and Non-Governmental Organizations, Academia, the private sector and youth.



Training workshop for civil servants from Central Asia and Afghanistan on climate change adaptation measures

WHERE:

Almaty, Kazakhstan

WHEN:

Annually since 2015

ORGANIZED BY :

The OSCE Programme Office in Astana, the Kazakh-German University, the Regional Environmental Centre for Central Asia

Speakers, including decision-makers from the science, business and civil sectors will be speaking and interacting with young civil servants on advanced practices of climate change adaptation and mitigation measures and on importance of ensuring multi-stakeholder involvement into the policy-making processes





High-Level International Conference on the International Decade for Action “Water for Sustainable Development”, 2018-2028



The High-Level International Conference on the International Decade for Action “Water for Sustainable Development”, 2018-2028, met in Dushanbe, Tajikistan, on 20-21 June 2018, to discuss how to achieve the objectives of the Decade, contained in United Nations General Assembly Resolution 71/222 of 21 December 2016, in order to support the implementation of the 2030 Agenda for Sustainable Development

THANK YOU FOR YOUR ATTENTION!

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