Workshop

Statistical Models to Improve the Seasonal Runoff Forecast in Central Asian River Basins

Preliminary Results from the CAWa project

1   Dates & Venue

Dates: 9 – 10 June 2016

Venue: Conference Room "Baiterek"
                Kazzhhol Hotel
                Gogol St 127, Almaty, Republic of Kazakhstan

Accomodation for participants from outside Almaty is organized in Kazzhol hotel. Participants arriving by air plane will be met at the airport and transferred to Kazzhol hotel.

2   Objectives

With Central Asian economies heavily relying on river water availability, the seasonal runoff forecast is a major task of the National Hydrometeorological services. However, high spatio-temporal climate variability, coarse observational networks in the headwater catchments, and simplified methodological approaches frequently result in runoff forecasts, the quality of which does not satisfy the end-users. The integrated water management for agricultural purposes, energy production and ecosystem functioning calls for longer-term forecasts with acceptable accuracy.

The workshop will bring together specialists from the forecasting departments of the Central Asian National hydrometeorological services to exchange on the currently used forecasting approaches and their reliability. New approaches based on statistical models and globally available climate and remote sensing data will be presented and their potential for improving the runoff forecast in terms of extending the lead-time and increasing the forecast accuracy will be discussed. Finally, the participating experts will discuss the operational implementation of the new methods at the Hydrometeorological Services of Central Asian countries.

Participants

The meeting gathers specialists from the runoff forecasting departments of the national hydrometeorological services from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, from national and regional early warning centres, Central Asian research institutions as well as from GFZ German Research Centre for Geosciences.

Language

The presentations will be given in English or Russian. Simultaneous translation will be provided.

3   Organizers

CAWa Project

"Regional Research Network Water in Central Asia"

www.cawa-project.net

Helmholtz Centre Potsdam

GFZ German Research Centre for Geosciences

Hydrology Section

Potsdam, Germany

www.gfz-potsdam.de

In cooperation with:

Regional Environmental Centre for Central Asia

Almaty

carececo.org

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Transboundary Water Management in Central Asia Programme

www.waterca.org

This activity is part of the German Water Initiative for Central Asia – the "Berlin Process"

Contact to the organizers:

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4   Preliminary Programme

Thursday, 9 June 2016	
9:00	Registration of participants
9:30	**Opening** ▪ Welcome by R. Schimkoreit *(Consul general of the FR of Germany in Almaty)* ▪ Water and climate-related research within the CAWa project *(S. Vorogushyn)*
Session 1	**Benchmark: Existing approaches for seasonal runoff forecasts at the Central Asian Hydrometeorological services**
10:00	*Session head: J. Baidulloeva (Tajikhydromet)* Presentations (20 min.) by Hydromet specialists from each country on the methods and performance of their forecasts, including information about ongoing projects in the field of forecast improvement ▪ The methods of long-term forecasting of water availability of the rivers of Kazakhstan *(O. Karaeva, Kazhydromet)* ▪ Hydrological forecasting for Kyrgyz river basins *(E. Omorova, Kyrgyzhydromet)*
10:50	*Coffee Break*
11:15	▪ Hydrological forecasting in Tajik river basins *(V. Khomidov, Tajikhydromet)* ▪ Hydrological forecasting in Turkmen river basins *(M. Agalhanova, Turkmenhydromet)* ▪ Methods and approaches of operational hydrological forecasts in Uzbekistan *(N. Vislova, Uzhydromet)*
12:30	*Lunch*
Session 2	**Vision: Towards regional drought monitoring and early warning in Central Asia**
13:30	*Session head: N. Agaltseva (Uzhydromet)* ▪ Drought forecasting in Uzbekistan: methods and results *(N. Agaltseva, Uzhydromet)* ▪ Development of drought early warning system *(A. Pak, NIGMI)* ▪ Experience of the drought monitoring centre in Uzbekistan and development of regional cooperation *(N. Gavrilenko, Uzhydromet)*
15:00	*Coffee Break*

Session 3	**Potential: May statistical models improve the seasonal runoff forecast? Preliminary results from the CAWa Work Package 2**
15:30 – 17:30	*Session head: S. Vorogushyn (GFZ German Research Centre for Geosciences)* ▪ Remote-sensing based snow cover monitoring in Central Asia: The MODSNOW tool *(A. Gafurov, GFZ)* ▪ Using MODSNOW maps for improving flow forecasts in the Naryn basin *(O. Kalashnikova, CAIAG)* ▪ Statistical prediction of seasonal discharge using multi-variate analysis *(H. Apel, GFZ)* ▪ Variability of Winter Precipitation in Central Asia - Spatial Variations and Sources of Predictability *(L. Gerlitz, GFZ)*
19:30	*Dinner reception*
Friday, 10 June 2016	
Session 4	**Roadmap: Operationalization and implementation of the statistical models at the Central Asian Hydromet services**
9:00	*Session heads: S. Vorogushyn, A. Gafurov (GFZ German Research Centre for Geosciences)* Discussion: ▪ Selection of river basins for CAWa forecast model implementation ▪ Observational data for model setup and validation ▪ User requirements on the operational forecasting tool ▪ Roadmap / timeline for further activities
10:30	*Coffee Break*
11:00	Discussion continued
	Outlook
12:00	*S. Vorogushyn (GFZ German Research Centre for Geosciences)* ▪ Summary and outlook on future steps within CAWa WP2
12:30	*Lunch*

The programme is subject to changes.