

Minutes

Work meeting on the PEER Project “Transboundary water management (TWM) adaptation in the Amu Darya basin to climate change uncertainties” Tashkent, SIC ICWC, 24 March 2016

Participated:

SIC ICWC: A.Sorokin, D.Ziganshina, D.Sorokin, R.Khafazov, G.Solodkiy, Sh.Munimov, I.Beglov, R.Toshpulatov, Sh.Zaitov, A.Degtyaryova, I.Rusiev, I.Ergashev, A.Galustyan.

Co-PI from BWO Amu Darya: A.Nazariy

Invited:

Central Water Administration of the Ministry for Agriculture and Water Resources: B.Burkxonjonov, Deputy Head of water balance and water conservation development division.
Center of Hydrometeorological Service at the Cabinet of Ministers of the Republic of Uzbekistan: N.Agaltseva, consultant on regional climatic scenarios and their effect on water resources in the Amu Darya River basin.

Principal Investigator Prof. V.Dukhovniy, Co-PI from Turkmenistan G.Nurmukhamedova, invited person N.Nosirov (Institute of Water Problems, Hydropower, and Ecology, Republic of Tajikistan) and project participant T.Kadirov participated in the meeting via Skype and e-mail.

Agenda:

- 1.Project work progress
- 2.Changes in the list of project personnel
- 3.Data support of the Project
- 4.Coordination of actions among the project personnel
- 5.Agree on approaches to scenario building and modeling.

Work done and decisions:

On the 1st item A.Sorokin made a report on the work progress. There were no delays from the work schedule, except for collection of data on Turkmenistan and activities related to adaptation of ASBmm. The information report for the first quarter was submitted in time. It was decided: all key personnel should submit technical reports on the results of work done until 1st of April, and A.Sorokin should summarize these reports on the 1st work stage. The following changes in the project timeline are to be made: 1) collection of data on Turkmenistan - 30 April; 2) adaptation of ASBmm – 1 September. The period of work on adaptation of ASBmm was prolonged as we started to use the new ICAM (Integrated Computer-Aided Manufacture) methodology developed in the U.S. that was not earlier planned in the Project.

On the 2nd item, the current situation on the changes in project key personnel that became necessary was discussed. It was decided to assign the tasks of retired A.Kats and late Yu.Ukhalin to the staff members of SIC ICWC R.Khafazov and R.Toshpulatov; assign to them the tasks related to adaptation of ASBmm to the Amu Darya basin. For the collection of missing data on Turkmenistan, it was decided to involve (to the extent that the project budget for Turkmenistan group allows) a new consultant.

On the 3rd item, the current data support of the Project was discussed, namely availability and lack of data necessary for the Project. The participants noted the lack of data on Turkmenistan (Karakum canal zone) over the last 5-7 years and the lack of information on the agricultural

development strategy in Turkmenistan after 2020. It was decided to collect the missing water-related and economic data on Turkmenistan by the end of May. Existing information gaps will be filled by the data collected by the project partners from Turkmenistan and BWO Amu Darya and the data obtained from open sources.

On the 4th item, the mutual obligations of the project personnel on due dates for exchange of data and research results. The data on climatic scenarios REMO (*G.Solodkiy*) were received, now are under processing and will be passed to the modeling team (for *A.Sorokin*) by 1 April; the corrected calculation algorithms for the planning zone (*A.Sorokin*) will be passed to the modeling team (for *R.Khafazov*) by 15 April; the output data from the planning zone development scenarios 2050, namely cropping patterns, yields, innovations and their impact on crop yields and crop water requirements, and non-irrigated agriculture water demands (*Sh.Muminov*) will be passed to the modeling team (*A.Sorokin*) in two steps (1 April, 1 June); the data on crop water requirements by 2050 calculated on the basis of the climatic scenario REMO (*G.Solodkiy*) will be passed to the modeling team (*A.Sorokin*) in two steps (1 July, 1 September).

On the 5th item, the main approaches to scenario building and modeling were agreed on. The following decisions were made: for modeling the river runoff series until 2050, apply an approach, which is based on the concept of the cyclical nature of natural process variations. Such cyclical nature is viewed as progressive development on which climate-caused changes have an impact rather than as simple periodical repetition of observed phenomena. The historical series cycles will be used and corrected to get future series using the coefficients derived from the SANIGMI Institute (Research Institute of the Center of Hydrometeorological Service) model's assessments. The basic research method will be simulation modeling, with organization of numerical experiment; the U.S. ICAM methodology (Integrated Computer-Aided Manufacture) for modeling complex systems will be used as well. For agricultural development scenarios 2020 we will use the data from official data sources, while, when building scenarios for the period from 2020 to 2050, we will justify (by analyzing available national documentation, i.e. decrees, programs, and reviews of international organizations, etc.) and consider the main benchmarks and boundaries, within which trends will be built.