Report on business trip to the USA

Basic information related to the business trip to the USA is given below:

Business traveler	R.Khafazov Position: programmer
Period	October 13-23, 2016
Destination	Department of Earth and Planetary Sciences, the Johns Hopkins University; Baltimore, Maryland, USA
Audience	Hydroclimate Research Group: B.Zaitchik, Assistant Professor (zaitchik@jhu.edu); D.Ghatak, Postdoctoral Fellow (dghatak1@jhu.edu); F.Policelli, PhD student & AST in Hydrological Sciences at NASA Goddard Space Flight Center.

Ppurpose of visit

During his visit, R. Khafazov: (1) provided a general information about the project and approaches used to achievethe intended results; (2) presented planning zone model; (3) collected recommendations from USA partners.

Under the presentation on the «Transboundary water management adaptation in the Amudarya basin to climate change uncertainties» project, basic aims, tasks and results of the first stage of research were demonstrated. The presentation was prepared by A.Sorokin and added with presentations by G.Solodkiy, Sh.Muminov and D.Ziganshina. The audience underlined that the project fully covered not only hydrological and climatic research, but also economic and legal research.

Under the presentation on the planning zone model, application of IDEF family of methods for design of the function and information models of planning zone and basic means and methods for development of the server and client parts of the model were demonstrated. Then the use of planning zone model was demonstrated with the help of the client interface of the model available at http://asbmm.uz:2016/. The audience noted the application of IDEF family of methods for design of the function and information models and up-to-date technologies. The audience also noted the systematic and comprehensive

approaches used for design and development of the planning zone model, a wide set of not only hydrological indicators, but also socioeconomic ones.

After presentations on the project and planning zone model, the audience proposed the following recommendations:

- use of remote sensing methods (Land Information System (LIS) http://lis.gsfc.nasa.gov/) to acquire input data, as well analyze output data of the planning zone model;

- use of several climatic models to analyze crop water requirements (REMO Model http://www.remo-rcm.de/+WCRPCORDEXhttp://www.cordex.org/index.php?option=com_content&view=article&id=89&Itemid=498+NASANEX-GDDPhttps://nex.nasa.gov/nex/projects/1356/);

- use of NASA Land Data Assimilation Systems http://ldas.gsfc.nasa.gov/ to acquire the missing hydrological and climatic data of the planning zone model.