Study of water and land using in mountainous regions of Fergana Valley in conditions of climate change

International Workshop on the Northern Eurasia Mountain Ecosystems
10 -13 September, Bishkek

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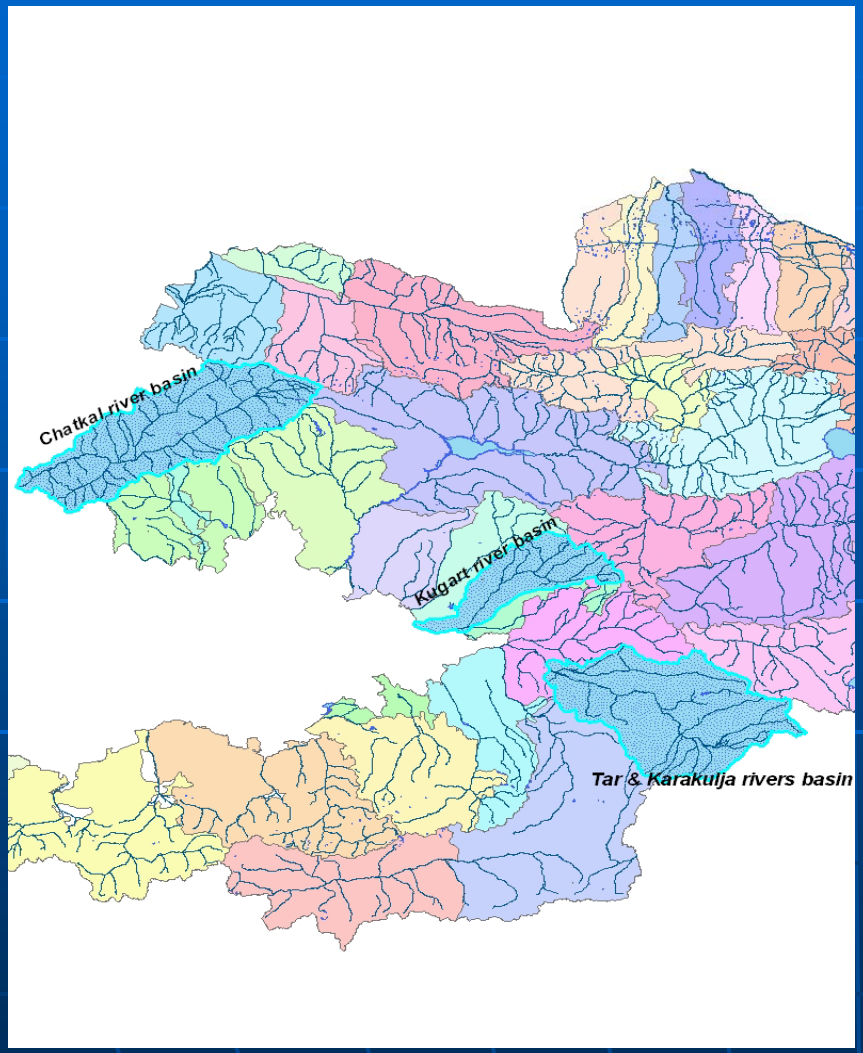

Topical points:

The investigation of flow forming conditions, river's nourishment regime, the assessment of river sources, physical and statistic analysis of river flow and its conditions.
Evaluation of the impact of climate change on water resources.
Investigation of water and land use dynamics and determination of interconnections between them.
Solution of rational water and land use problem by means of modeling and optimization.
Development of optimal model of water use for studied areas.

Study site:

Chatkal river (Chatkal region)
Kugart river (Suzak region)

Materials and methodology:

Meteorological time series
Hydrological time series
Long term land use and water use data
Data of GIS
Physical and statistic analysis
Solutuion of optimization problem in using water resources and land by means of modeling studies.

Results and discussion:

The application of model with all sources of meteorological and hydrological, water and land use information was not previously experimented in the Kyrgyz Republic and should help to understanding the possible applications of complex model in the water resources management and research work at different scales.